SCIENCE ...E INDUSTRY

Manufacturers Record

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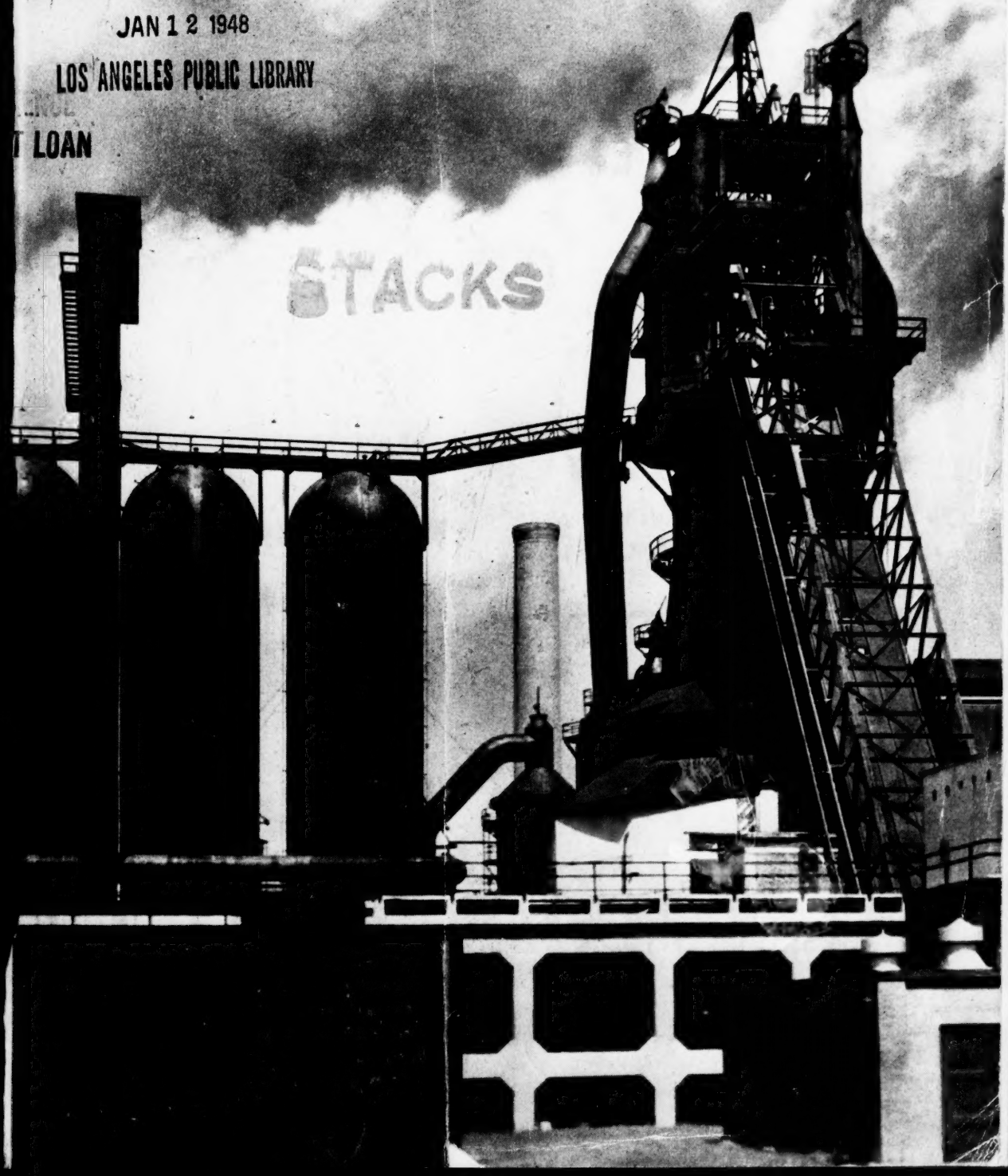

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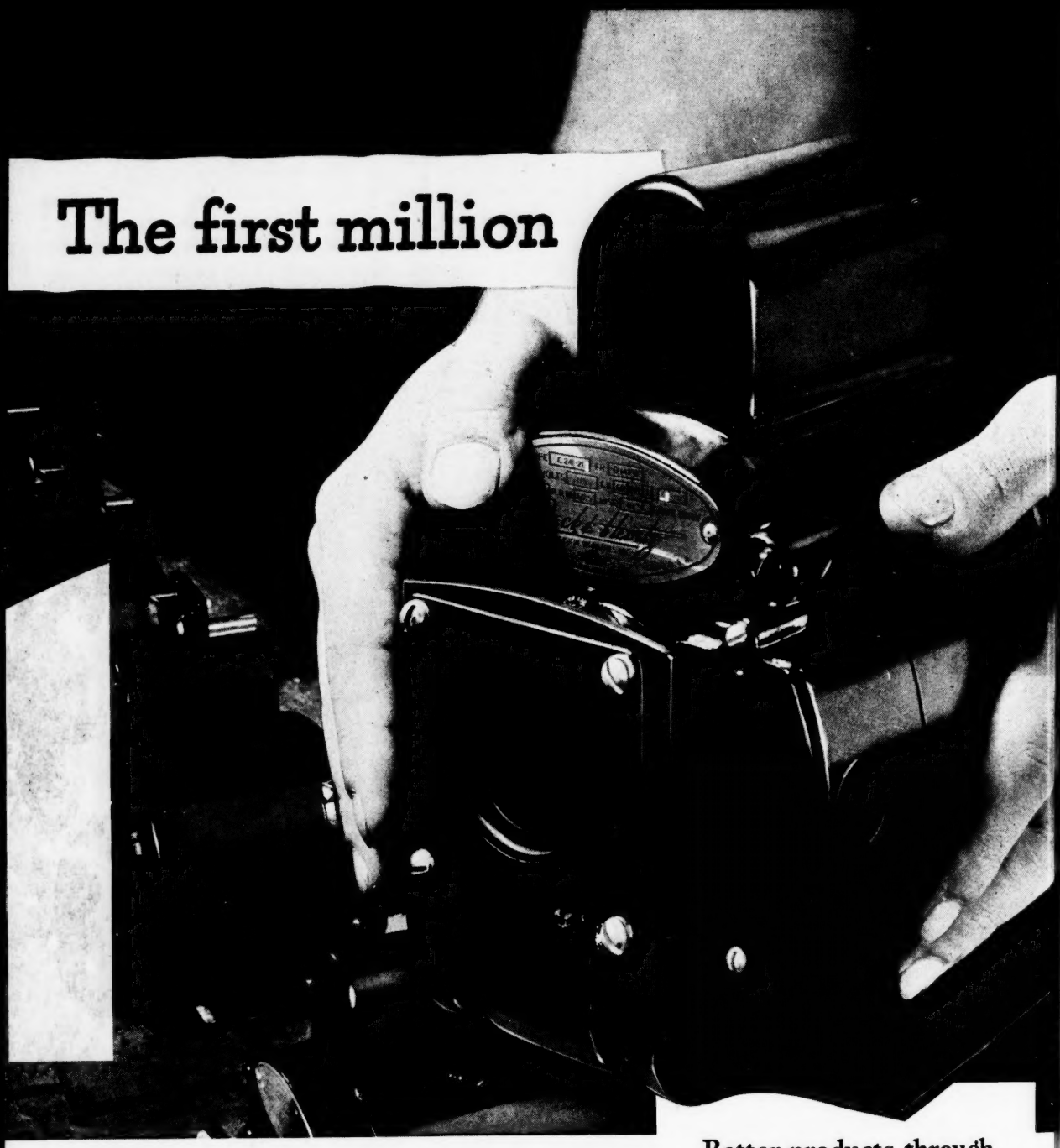
The first million



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JACK & HEINTZ PRECISION INDUSTRIES, INC., *Cleveland 1, Ohio*

MANUFACTURERS RECORD

ESTABLISHED 1882

Devoted to the Industrial Development of the South and Southwest

Member AUDIT BUREAU OF CIRCULATIONS

Volume 117 **JANUARY, 1948** **Number 1**

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COVER ILLUSTRATION—The steel industry of United States last year produced 84,000,000 tons of steel, an amount greater than ever made before in a peacetime year. Production in 1948 is expected to equal or better that figure, according to the American Iron and Steel Institute, which in predicting continued high activity, assumes that existing and additional steel capacity can be operated without interruptions from work stoppages or strikes and without shortages of materials of the proper quality. In 1948, says an announcement by Institute President Walter S. Tower, steel companies of the country will have the benefit of some of the new producing facilities which have been under construction for a year or more as a part of the steel industry's billion dollar expansion program undertaken in accordance with the long established policy of meeting demands for its products. Lone Star Steel Co., a Texas corporation, several months ago started producing pig iron at Daingerfield, Texas, where it operates a plant under a lease agreement with the War Assets Administration. Facilities there include those for producing coke, as well as the pig iron and by-products. Three coal mines in eastern Oklahoma are included in the agreement. The picture on the cover shows the furnace, which is equipped with three hot blast stoves, shown at the left, capable of producing 100,000 cubic feet of blast per minute on a straight line temperature of 1600 degrees Fahrenheit.

MANUFACTURERS RECORD PUBLISHING CO.

Publishers of MANUFACTURERS RECORD, CONSTRUCTION, DAILY CONSTRUCTION BULLETIN and BLUE BOOK OF SOUTHERN PROGRESS.

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Pacific Coast: 227 Spencer St., Glendale 2, Calif.

Subscription Rates: One year $3.00. Two Years $5.00
Single Copies 35c, back numbers over 3 months old 50c.

"The Manufacturers Record," published monthly by Manufacturers Record Publishing Co., 109 Market Place, Baltimore 3, Md. Entered as second class matter Baltimore, Md., under the act of March 3, 1879. Volume 117, No. 1. Single Copies 35c.

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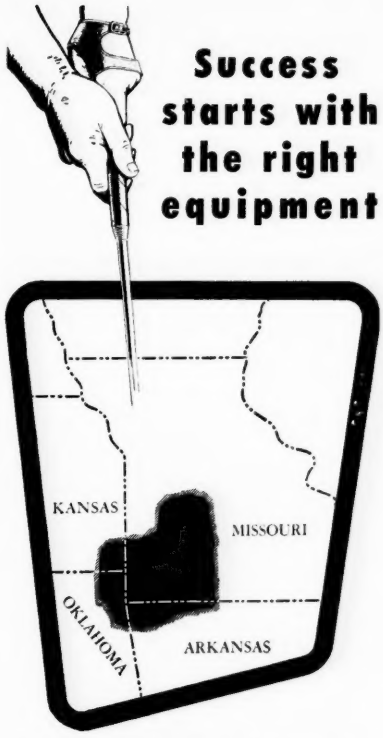

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Southern Business Outlook

Manufacturing output for the 16 Southern states continued the upward trend in the latest month with moderate increases in both durable and nondurable goods. Total production showed a 3 per cent raise over the previous month and a 22 per cent jump over the previous year's figure.

Both electric energy production and steel output again registered increases after falling off slightly in the preceding month. Increases were noted in other industrial indices. However, crude petroleum output and pine lumber production fell off.

The steady increase in cash resources continued as Federal Reserve member banks reported a rise in bank deposits of $123 million over the preceding month.

Retail sales for the latest month were boosted slightly with the advent of early Christmas buying and a steady demand for both durable and nondurable goods.

MONTHLY INDUSTRIAL ACTIVITY

(16 Southern States)

	Latest Month	*Preceding Month*	*Year Ago*
All Manufacturing (value)	$2,942,083,000	$2,849,889,000*	$2,429,437,000
Durable Goods (value)	1,062,095,000	1,025,396,000	890,968,000
Nondurables (value)	1,879,988,000	1,824,493,000	1,538,469,000
Steel Output (tons)	1,201,873	1,093,791	1,141,779
Pig Iron Output (tons)	834,401	780,731	792,680
Cotton Consumed (bales)	724,564	638,821	812,389
Spinning Activity (1,000 spindle-hrs.)	9,032,000	7,883,000	8,539,000
Pine Lumber Cut (board feet)	64,079,000	68,709,000	60,263,000
Electric Output (1,000 kilowatt-hrs.)	7,501,015	6,757,562	6,893,824
Construction Awards	$ 257,608,000	$ 167,222,000	$ 150,933,000

FARMS AND MINERALS

Farm Marketings (value)	$1,057,168,000	$ 678,722,000	$ 709,634,000
Meat Production (head slaughtered)	1,675,150	1,403,600	1,399,600
Coal Output (tons)	27,781,000	27,343,000	22,419,000
Crude Petroleum Output (barrels)	102,709,500	106,288,150	91,742,200

FINANCE AND DISTRIBUTION

New Corporations (number)	1,898	2,160	1,794
Business Failures (number)	43	38	7
Bank Deposits	$ 9,952,000	$9,829,000,000	$7,855,000,000
Bank Clearings	$7,544,221,000	$6,098,298,000	$6,372,699,000
Retail Sales	$2,602,339,000	$2,567,728,000*	$2,551,758,000
Carloadings	1,305,200	1,374,691	1,233,700
Imports (tons)	1,572,750	1,882,750	1,201,500
Exports (tons)	5,968,600	6,746,200	3,332,600

*Revised Steel and iron data from reports of American Iron & Steel Institute; Pine Lumber from Southern Pine Association; Crude Oil from American Petroleum Institute; New business and business failures, Dunn & Bradstreet; Caroladings, Association of American Railroads; Other data from U. S. federal agency statistics.

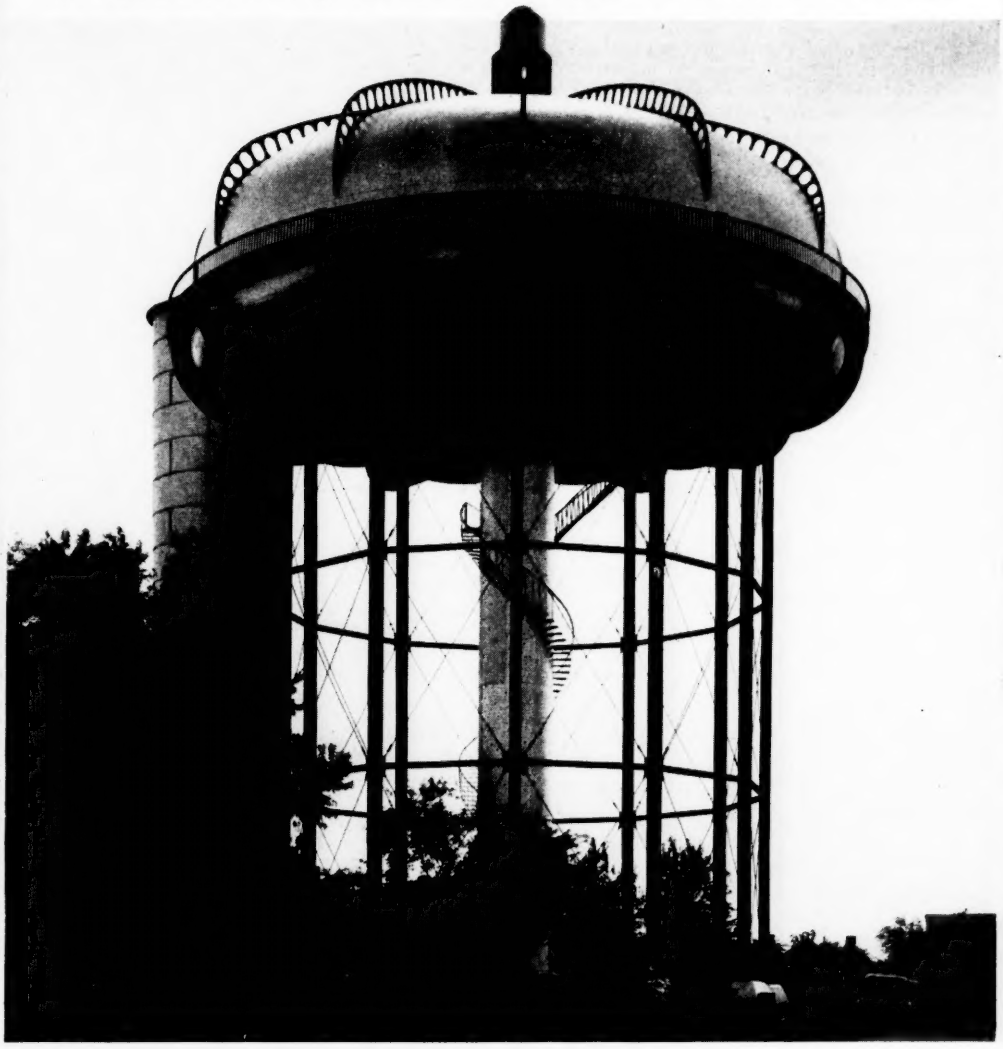
MANUFACTURING EMPLOYMENT

(Persons Employed)

	Durable Goods		*Nondurables*		*All Manufacturing*	
	Latest Month	*Preceding Month*	*Latest Month*	*Preceding Month*	*Latest Month*	*Year Ago*
Alabama	138,000	137,000	93,000	93,000	231,000	225,000
Arkansas	47,000	47,000	23,000	23,000	70,000	69,000
Florida	32,000	32,000	48,000	46,000	80,000	79,000
Georgia	70,000	70,000	182,000	181,000	252,000	244,000
Kentucky	63,000	63,000	68,000	67,000	131,000	127,000
Louisiana	57,000	58,000	86,000	85,000	143,000	129,000
Maryland	113,000	109,000	116,000	123,000	229,000	239,000
Mississippi	57,000	57,000	34,000	34,000	91,000	89,000
Missouri	152,000	150,000	209,000	207,000	361,000	349,000
North Carolina	89,000	88,000	281,000	279,000	370,000	363,000
Oklahoma	21,000	21,000	35,000	34,000	56,000	52,000
South Carolina	36,000	36,000	154,000	153,000	190,000	182,000
Tennessee	92,000	92,000	156,000	155,000	248,000	240,000
Texas	138,000	138,000	201,000	200,000	339,000	316,000
Virginia	68,000	69,000	148,000	147,000	216,000	211,000
West Virginia	87,000	86,000	50,000	49,000	137,000	134,000
South	1,260,000	1,253,000	1,884,000	1,876,000	3,144,000	3,048,000

Of the above tabulation, data for Florida are figures rounded to nearest thousand from the monthly statistical report of Florida Industrial Commission; Maryland, State Department of Labor and Industry; Louisiana, Louisiana State University, College of Commerce; North Carolina, State Department of Labor; Oklahoma, State Employment Security Commission; Tennessee, State Department of Employment Security; Texas, The University of Texas, Bureau of Business Research; Virginia, Department of Labor and Industry. In the absence of cooperative aid from other states, the remaining figures are result of monthly surveys by MANUFACTURERS RECORD.

GENERAL WATER EXTENSION PROGRAM AT HICKORY INCLUDES 1,000,000-GALLON HORTON ELEVATED TANK



IN many cases, the erection of an elevated tank is the *main step* taken in extending or improving a municipal water supply system. At Hickory, N. C., the following threefold program was recently undertaken to improve the water service: (a) The 1,000,000-gal. Horton elevated tank shown above was erected to supplement the storage capacity provided by three 20-ft. diam. standpipes. (b) The filter plant capacity was increased from 1.5 mgd to 3.5 mgd. (c) Feeder line capacity was increased to provide a sufficient volume of water for fire protection and industrial use in a rapidly-developed industrial area.

Horton elevated tanks like the one shown here are installed in municipal water distribution systems to improve service, to reduce pressure variations and to lower pumping costs. They are built in capacities up to 2,000,000 gals. For industrial service, Horton elevated tanks are built in all standard sizes to meet requirements of automatic sprinkler systems and general water service. Write our nearest office for quotations.

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Plants in BIRMINGHAM, CHICAGO and GREENVILLE, PENNSYLVANIA

The Southern Spotlight

Birmingham District

By R. W. KINCEY

Birmingham—The year end finds several reassuring signs for 1948 and thereafter for the Birmingham industrial district. The fundamental stability of the district—due mainly to the essential nature of its production—seems assured. The self-confidence of this area and the entire Southeast has immeasurably increased as industrial and production endeavor surges upward. Continued prosperity is reflected in the district's order books. Almost without exception, they stand at record proportions, indicating steady production through 1948.

PRODUCTION

•**Steel.** The new year is expected to exceed 1947 in the production of iron and steel and their products. Rehabilitation of its Redding ore mine by the Woodward Iron Co. will add to red ore output. T. C. I. in converting its hot rolled sheet mill to a cold reduction mill, is expected to add some 130,000 tons annually in critically needed sheets. At Fairfield, a new open hearth furnace already in production will bring the company's ingot capacity to about 2,750,000 tons annually.

All Birmingham foundries are contributing to the national program through production of castings for such firms as International Harvester, Chrysler Motors and others. *In some instances, these mark the first time such products have come from this industrial section.*

•**Mineral Wool.** Marking another new product for Birmingham, production of mineral wool has gotten underway at a two-cupola installation of the Sloss-Sheffield Steel & Iron Co. The company also turns a considerable amount of its blast furnace by-products into finished goods.

•**Coal.** The state's coal industry is assured steady production if export demand holds up. No decline is foreseen in need for fuel abroad. Estimates for the year are about 16 million tons, a substantial gain over 1947.

•**Shipbuilding.** Paced by the Ingalls Co., shipbuilding in the South established something of a national record. Pioneering in all-welded ship construction, Ingalls launched its 100th vessel December 19. Creating a vast market for Southern steel, shipbuilding is looked upon as a safeguard against leaner days for steel companies.

FINANCE

•**Dividends.** Directors of the Gulf, Mobile & Ohio Railroad on December 16 declared the first dividend ever passed on to common stock holders either by the G. M. & O. or its predecessor, the Gulf, Mobile, and Northern.

Woodward Iron Co. declared dividends of 50 cents a share and an extra dividend of $1 a share, both payable December 27.

•**Bank Deposits.** Savings deposits with Birmingham banks stand near a record high at approximately $60 million. Savings & Loan Associations passed out nearly $1 million to depositors and savings accounts on December 1.

The Southeast

By JOHN MEBANE

Atlanta—High prices failed to prevent a record-breaking Christmas spree for Georgians and other southeasterners as holiday buyers took long-extended advice and did their Christmas shopping early. Atlanta merchants termed the throng entering stores on December 13 the "greatest in the city's history."

RETAIL TRADE

•**Sales.** The Federal Reserve Bank of Atlanta reports that through October department store sales in the Sixth Federal Reserve District were slightly over the corresponding period in 1946. In its "Monthly Review" the bank declared that retailers' needs for working capital are higher than they have been for several years.

•**Credit.** Meanwhile, the bank reported that combined accounts receivable and inventories at credit-granting department stores reporting to the bank were 8 per cent greater at the end of October than at the end of the corresponding month in 1946, and 69 per cent greater than at the end of October, 1945. Though inventories were larger than last year, increased accounts receivable accounted for nearly 85 per cent of the combined increase.

EMPLOYMENT

•**Industrial.** With the advent of new establishments in Georgia, employment remains generally steady. One dissenting note comes from Joseph K. Heyman, Atlanta business analyst, who estimates industrial employment to be about 9,000 less than a year ago. Recent statistics indicate that the state's industrial employment is hovering around 252,000. This is a significant jump over the 193,000 at the outbreak of the war, but considerably under the war peak of 315,000 reached in February, 1944. Sharpest declines were recorded at the shipyards and at the Bell Aircraft plant in Marietta which is no longer in operation.

AGRICULTURE

•**Sales.** State consumption of fluid milk soared as sales reached a figure nearly three times as great as that of 10 years ago. Impressive gains have also been made in production.

•**Dairy Expansion.** According to Paul W. Chapman, dean of College of Agriculture of the University, Georgia's dairying industry during the next decade will grow at a rate exceeding that of any other major phase of agriculture. The chief reasons are: markets already exist; more farmers are discovering the value of grass and how to grow it in winter as well as in summer.

MINING

•**New Business.** Rich feldspar deposits have been found recently in Jasper County, Georgia. The discovery may lead soon to the development of another industry for the middle part of the state. The Agriculture and Industrial board reports that the state's first feldspar mine, near Monticello, will open in January. The Georgia feldspar contains a high percentage of potash, making it suitable for pottery and glassware uses.

FINANCE

•**Dividends.** Reflecting the high level of economy in the Southeast, Scripto, Inc., of Atlanta, reported its 1947 sales volume the largest in its history, with dollar volume 35 per cent above any previous record, according to President James V. Carmichael. The company announced a semi-annual dividend of $1.25 a share on 5 per cent cumulative preferred stock, plus a semi-annual dividend on preferred stock. Introduction of additional new products is planned by Scripto

(*Continued on page* 10)

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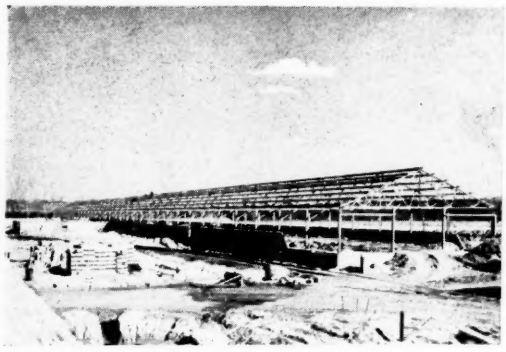

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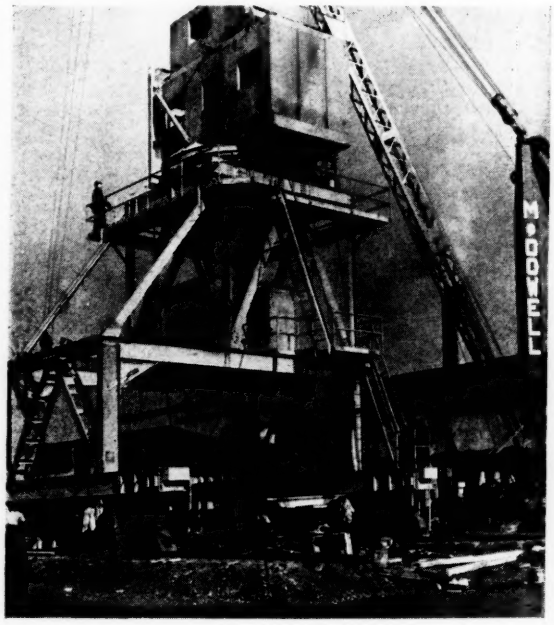

Revolving wharf crane—Strl. Steel by Virginia Bridge Co. Crane and mechanical equipment by Wellman Engr. Co.

220' Highway Swing Span for bridge over Roanoke River near Williamston, N. C.

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Virginia Bridge Company

Roanoke Birmingham Memphis New York Atlanta Dallas

UNITED STATES STEEL

The Southern Spotlight

(*Continued from page* 8)

in 1948.

As evidence of its successful year in 1947, the Atlanta Paper Company, through President Arthur L. Harris, announced an extra dividend of 5 cents a share on the company's common stock, in addition to the regular quarterly dividend of 10 cents a share. The company plans expansion in 1948.

•**Bank Dividends.** Two quarterly dividends of 40 cents a share, aggregating $480,000 have been declared by the First National Bank of Atlanta. Half is payable January 1, the remainder April 1.

Citizens and Southern National Bank declared a regular dividend of 2 per cent, or 20 cents a share on the par value of $10 a share, plus an extra dividend of the same amount.

Citizens and Southern Holding Co. also announced distribution of a dividend of 10 cents a share to shareholders of the C. & S. Bank. Totaling $250,000, dividends are payable January 2.

NEW BUSINESS AND EXPANSIONS

•**1947 Review.** The first ten months of 1947 showed a total of 455 new manufacturing plants established in Georgia, according to George H. Broadnax, Jr., manager of the Community Development Division of the Georgia Power Company. New plants represented a capital investment of more than $21 million, employed 8,900 persons with aggregate payrolls of $15,500,000. Final accounting is expected to show the establishment of 600 new plants. New plants, said Mr. Broadnax, included 28 large industries, employing 2,000 persons with combined capital investment of $4 million. Others are smaller, locally owned plants employing up to 300 workers.

New service establishments during the 10 month period numbered 2,356. They represent an aggregate capital investment of $32 million, afford employment to 9,230 with total payrolls of $17,180,000.

Piedmont Area

By J. A. DALY

Charlotte—Piedmont Carolina manufacturing industry entered 1948 in its strongest financial position after amassing, in 1947, unprecedented dollar profits, reflecting volume production and inflated prices. Events at home and abroad caused little change in 1948 prospects for Carolina business and industry. The area's economic momentum at the New Year's advent was ponderous, supporting management's confidence that tremendous demands will continue from domestic and overseas customers at least during the greater part of 1948.

RETAIL TRADE

•**Sales.** The pre-Christmas shopping season ended in a rush of buying throughout the Carolinas. Seasonal gift merchandise went fast, but buyers continued critical of quality. Department stores reported the retail price level as the highest on record. Retailers reported high sales volumes with only moderate consumer resistance to manufacturers' newly advanced prices for shoes, carpets, radios, furniture, cotton textiles, trunks and bags and other lines up 5 to 10 per cent. Household electric supplies were in heavy demand.

•**Automotive.** Although car prices were up slightly, automotive trade held record levels during December. Demand for new and used cars and trucks was steady as well as for tires and accessories despite increased prices. Repair shops reported heavy business with widespread complaint against the shortage of anti-freeze fluids.

PRODUCTION

•**Furniture.** Heavy bookings are reported for North Carolina's furniture industry, still operating at high speed despite recent moderate price boosts. Industry spokesmen said that for ten 1947 months, dollar volume of orders was 26 per cent up and shipments were 28 per cent above corresponding 1946 months.

•**Electric.** Power production by Carolina company continued at record levels, for some companies 25 per cent above wartime peaks. Adequate coal supplies were reported by all companies.

•**Pulp and Paper.** Contributing materially to the balancing of Piedmont industry and agriculture, the pulp and paper producing industry was experiencing prosperity and rapid expansion as the New Year began.

•**Chemicals.** Companies dealing notably in agricultural and textile chemicals reported being harassed at the year's end by tremendous demand. Prices were steady to firm. Inadequate supplies of fertilizer presented handicaps to Carolina campaigns aiming at increasing grain cultivation in 1948.

•**Tobacco.** Federal revenue collections indicated that cigarette production hit an all-time high in October for American plants. The industry's 1947 production was expected to be almost 400 billion cigarettes, requiring nearly 1 billion pounds of leaf.

PRICES

•**Retail products.** Complaints regarding the increased cost of living and the aggravated problems of production and pricing were heard throughout the area. Management particularly complained of inadequate depreciation allowances under existing statutes. White collar workers and unorganized labor contended with the decreasing purchasing power of salaries and wages. Most divisions of organized labor began reaping benefits of newly gained pay raises.

•**Lumber.** Southern pine was reported strong, prices firm, and supplies of dry lumber adequate. Scarcity of western pine stock, Douglas fir and tidewater red cypress, was reflected in high prices and irregular sizes. Demand was brisk for Southern hardwoods at high prices. Heavy production in oak flooring failed to depress peak prices. Almost critical conditions existed in fir plywood and panel door trade.

•**Textiles.** With cotton consumption continuing well above 800,000 bales monthly, mill prices of yarns and fabrics were lifted substantially in December. Trade buyers continued demand for second and third quarter contracts. Heavier cotton fabrics and rayon led this price rise, some duck constructions being advanced 2½ cents a yard. Government estimate puts the 1947 cotton crop at 11,694,000 bales, compared with 8,600,000 in 1946. Cotton prices surged to new 1947 highs.

LABOR

•**Wages.** On the increasingly powerful labor front, leaders of the CIO unions launched drives for a third round of post-war wage increases only a few weeks after the Carolina textile and other industries granted substantial wage increases. Both CIO and AFL unions announced inauguration of independent political action campaigns, creating new uncertainties for the Carolinas.

AGRICULTURE

•**Insect Control.** Estimating the crop pests caused record 1947 losses totaling $282 million over the cotton belt, leaders

(*Continued on page* 48)

NEW AND EXPANDING PLANTS

COMPILED FROM REPORTS PUBLISHED IN THE DAILY CONSTRUCTION BULLETIN

ALABAMA

ANNISTON—Anniston Manufacturing Co., expansion of weaving facilities.

ANNISTON—Monsanto Chemical Co., service building.

ANNISTON—Southern Bell Telephone and Telegraph Co., addition to main office.

ANNISTON—Utica Knitting Co., expansion program at mills.

BAY MINETTE—Steelwood plant, Georgia Hardwood Lumber Co., building, roofing painting.

BIRMINGHAM—G. S. Dowdy Candy Co., plant and equipment, $56,000.

BIRMINGHAM—F. H. Ross and Co., Inc., warehouse building.

GADSDEN—Cocoa-Cola Bottling Co., plant.

GADSDEN—Southern Bell Telephone and Telegraph Co., two-story and basement dial and toll building.

GADSDEN—WAA, overhauling and repairing blast furnace, $459,000.

GRAYSVILLE—City, natural gas system, $300,000.

HARTFORD — Alabama Construction Co., shirt factory, $39,033.

MONTGOMERY—Southern Bell Telephone and Telegraph Co., three buildings at Pharr, Mission, Harlingen.

ARKANSAS

CONWAY—Magnolia Pipe Line Corp., 20-inch line across Arkansas River near Mayflower.

HOT SPRINGS—Kenneth Schweer, three-story parking and service building, 209 Central Ave.

LITTLE ROCK—Southwestern Greyhound Lines, bus station, corner Sixth and Broadway.

McGEHEE—Rice Drying and Storage Association, drying and storage plants.

WOODROW—Linde Air Products Co., plant for production of oxygen and acetylene, $200,000.

FLORIDA

DADE COUNTY—Board of County Commissioners, sanitary sewer system at Miami International Airport.

DADE COUNTY—Ford Industry Co., radio transmitter station.

DADE COUNTY—Standard Oil Co., storage tank, 100 NW 73rd., $194,000, office warehouse and storage shed, $173,500, service station, 3960 Red Rd., South, $16,000.

FORT MEYERS—Sixtus Campton, fish dehydrating plant on Gulf Coast 15 miles south of Fort Meyers.

HIALEAH—Franklin Press, shop building, East 21st. St., $34,000.

HIALEAH — Hialeah Race Course Inc., bleachers, $35,000.

JACKSONVILLE—City commission authorized purchase of 670 capacitators for municipal electric plant, $45,000.

JACKSONVILLE — Florida Agriculture Supply Co., manufacturing plant, $724,600.

MIAMI—Babcock-Lamnot Co., warehouse, 2600 SW 28th. lane .

MIAMI—Curry, Inc., warehouse, 262 NW 28th. St., $19,700.

MIAMI—Edison Motor Center, addition to building.

MIAMI—F. A. Ellison, warehouse, 266 NW 26th. St., $15,800.

MIAMI—Florida Power and Light Co., new plant at Cutler.

MIAMI—Kohl and Gravatt, Inc., one-story warehouse, 200 block, NW 60th. St.

MIAMI — Munroe-Zeder, Inc., auto show rooms and offices.

MIAMI—Railway Express Agency, garage building, 400 block, NW 1st. Ave.

MIAMI—H. H. Ramseys and Sons, Inc., millwork building, 1150 NW Miami Court, $157,800.

MIAMI — Texas Co., service station, 5600 NW 17th., $20,000.

MIAMI — Edward E. Walton, warehouse, 7100 block, NE First Court.

MIAMI BEACH—Florida Greyhound lines, bus terminal, 638 Collins Ave.

MIAMI BEACH — Richard E. Lear, office and warehouse.

MIAMI BEACH—Orange State Oil Co., alterations and additions to service station, 15th. St. and Alton Rd.

NORTH MIAMI—Texas Co., service station, 12305 West Dixie Highway, $20,000.

OCALA—Swift and Co., six cold storage rooms.

PANAMA CITY—Coastal, Inc., change propane limes into natural gas lines, $700,000.

PINE CASTLE — Atlantic Chemical Co., warehouse, $50,000.

TAMPA — Canada Dry Co., three warehouses, Lakeland, Sarasota and Gainsville.

TAMPA—General Electric Supply Co., warehouse, $75,000.

GEORGIA

ALBANY — Georgia Power Co., power house superstructure.

ATLANTA — Atlanta Dairies Cooperative, building addition, $37,000.

ATLANTA — Atlanta Greyhound Corp., garage and service building, $157,361.

ATLANTA — Dixie Plywood Co., warehouse.

ATLANTA—Bernard South, Inc., office and warehouse building, Piedmont Ave., $35,342.

ATLANTA—Southern Railway Co., diesel locomotive repair facilities at Pegram shop.

ATLANTA—Star Provision Co., meat packing plant, $55,000.

REMERTON—Strickland Cotton Mill, addition to plant.

SAVANNAH—Union Bag and Paper Corp., expansion program, additional equipment at various plants, additions to factories, etc., overall cost: $10,000,000.

THOMASTON—Thomaston Mills, Bleachery Division, grey goods warehouse, work includes demolition, earthwork, glass, glazing, etc.

KENTUCKY

CORBIN — Crown Overall Co., branch plant.

GEORGETOWN — U. S. Shoe Corp., establishing plant.

LOUISVILLE — Bradley and Gilbert Co., one-story brick and steel addition, to be used as print shop, near 7th. and Magazine Sts., $20,000.

LOUISVILLE—Brown-Froman, brick and steel reinforced concrete addition to distillery at 18th. St. and Garland Ave., $650,000.

New and

Expanding Plants

Reported:

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LOUISVILLE — Kentucky Bus Lines, remodeling building, 213 W. Liberty St., $45,-000.

LOUISVILLE — Louisville and Nashville Railroad, five and one-half mile spur into new Leatherwood Coal Field, will purchase 8,000 coal cars for $25,000,000, and will build and operate mechanized mining plant.

PADUCAH—Best Fertilizer Co., seeking to lease acid area of Kentucky Ordnance Works.

LOUISIANA

ABBEVILLE—City, water and light plant, enlargement of switchboard and plant, $10,-000.

ALEXANDRIA—McLemore Livestock Commission Market, livestock building, $75,000.

ALEXANDRIA—Navy Department, U. S. Naval Armory on Casson St., $123,875.

ALEXANDRIA—Thompson-Stratton Motor Co., auto sales and service building $71,291.

BATON ROUGE—Ethyl Corp., development laboratory and pilot plant building.

BATON ROUGE—Louisiana Creamery, Inc., installing 37.6 tons of air conditioning equipment in plant, Dreyforth and Seiferth, $19,-594.

BATON ROUGE—Joe Romano and Son, one-story self-service laundry building, $19,791.

BELLE CHASSE—Micronizer Co., plant on 30 acre site.

BOGALUSA—L. E. Alford Co., tung plant buildings approximately 50 per cent completed.

DeRIDDER — DeRidder Motor Co., auto sales and service building, $77,950.

JEANERETTE — Lapeyrouse Motor Co., auto sales and service building.

LAFAYETTE—Dalferes Cigar and Tobacco Co., office and warehouse.

LAFAYETTE—Evans Electrical Supply Co., Inc., buildings on Scott Highway, $120,000.

MONROE—Kokinos, Inc., ice cream plant, 800 Jackson St., $100,000.

NEW ORLEANS—Barada and Page, Inc., building.

NEW ORLEANS—City, plans union station, $33,839,000.

NEW ORLEANS — Gulf Engineering Co., warehouse and carpenter shop building, Diamond and S. Peters St.

NEW ORLEANS—International Harvester Co., twine mill and office building, foot of Duddosat St., several million dollars.

NEW ORLEANS — United Gas Pipe Line Co., pipe line from Bayou Barataria Field to New Orleans.

Mississippi River Fuel Corp., natural gas pipe lines from Louisiana to St. Louis, $13,-654, 140.

RAYNE — Rayne Rice Dryer and Warehouse Co., steel and concrete rice dryer, warehouse and storage bins; unit for drying seed rice; seed rice cleaner and sacking machine, East Texas Ave., $500,000.

WINNFIELD — Lamkin Brothers, garage building, $65,000.

MARYLAND

ANNE ARUNDEL COUNTY—American Oil Co., engine testing laboratory.

BALTIMORE—American Bitumuls Co., office and warehouse, 1955 Chesapeake Ave., and four storage tanks for asphalt products.

BALTIMORE — Baltimore and Ohio Railroad, coaling and sanding stations, Wells and Johnson Sts., $140,000.

BALTIMORE—Baltimore Paint and Color Co., warehouse, 2315 Annapolis Rd., $25,000.

BALTIMORE—Baltimore Radio Show, Inc., WFBR, FM transmitter station and tower extension, $30,000.

BALTIMORE—Bethlehem Steel Co., planning expansion program.

BALTIMORE — William H. Bittorf, auto sales and service building, 4709 Belair Rd., $22,750.

BALTIMORE — City, building paper mill National Gypsum Co. adjacent to new plant now being completed at foot of Newkirk St. in Canton.

BALTIMORE — Consolidated Gas Electric Light and Power Co., garage, 1050 N. Front St., $30,000.

BALTIMORE—Devale Dairies, addition to ice cream plant, $12,000.

BALTIMORE — Diacont Lumber Co., addition to building, 925 Eastern Ave., $12,000.

BALTIMORE—General Motors Corp., auto self-service building, Key Highway and Battery Ave.

BALTIMORE—General Pontiac Corp., sales and storage building, $10,000.

BALTIMORE—August Koch, sales, show room and greenhouse, $10,000.

BALTIMORE—Master Building Supply Co., office and show room, 3102 Cold Spring Lane, $10,000.

BALTIMORE—Carrol J. Rousch, loading dock, $15,000.

BALTIMORE—Shell Oil Co., service station, Greenmount and Calvin Aves.

BALTIMORE—U. S. Industrial Chemicals, Inc., alterations and addition, 1600 Patapsco Ave., $24,000.

BALTIMORE—Western Maryland Railway, three piling clusters in Bear Creek at Sparrows Point.

BALTIMORE—Radio Station WITH, transmitter building, Edmondson and Ingleside Aves.

BALTIMORE COUNTY—Harry T. Campbell and Sons, truck storage building, west of York Rd. and south of Texas Lane, $10,-000, plant on Pulaski Highway, $18,000.

BALTIMORE COUNTY — A. A. Sapero, warehouse and office, Surry Drive and Seven Mile Lane, $12,000.

CURTIS BAY—Davison Chemical Co., acquired Silica Gel plant from WAA.

FREDERICK—Contracting Officer, Chemical Corps, curb and gutter around coal storage yard at Camp Detrick.

MIDDLE RIVER — Glenn L. Martin Co., acquired $6,000,000 worth of Government buildings.

RELAY—U. S. Concrete Pipe Co., warehouse, Washington Boulevard, $13,000.

SALISBURY — Chesapeake and Potomac

NEW AND EXPANDING PLANTS

Telephone Co., switchboard facilities prior to construction of new building, part of $1,079-000 expansion program.

MISSISSIPPI

EUPORA—City, glove factory, $100,000.
FULTON — Lion Oil Co., two bay brick service station building.
GREENWOOD—City ,plant for Bestform Foundations, Inc., $200,000.
LEAKESVILLE — Board of Supervisors of Greene County, garment plant.
MONTICELLO—Monticello Manufacturing Co., sprinkling system, $18,000.
NEW ALBANY—Board of Supervisors district #3 Union County, plant for furniture manufacturing, $150,000.

MISSOURI

KANSAS CITY—Lee Way Motor Freight Co., office and terminal building, Oak and Locust Sts.
ST. LOUIS—Anheuser-Busch, Inc., extending one building 20 feet, 926 Pestolozzi, $10,-000; partition in factory at 1019 Pestolozzi, $10,000; concrete retaining wall, 2900 S. Broadway, $25,200; warehouse, 3121 S. 9th. St., $136,000.
ST. LOUIS—James Braudes, storage building, $10,000.
ST. LOUIS—Clean Overall Supply Co., two-story addition to laundry, 1325 S. 7th., $30,-000.
ST. LOUIS—W. E. A. Cristman, storage building, 4464 Duncan, $10,000.
ST. LOUIS—General Fireproofing Co., addition to warehouse, $16,000.
ST. LOUIS— Guils, Inc., plant and office, 3003 Delmar Boulevard.
ST. LOUIS — Hollander and Co., loading platform, improvement to warehouse and show room, 3041 Locust St., $15,000.
ST. LOUIS—A. B. Lambert, garage, 3531 Bernard, $13,000.
ST. LOUIS—Lindburg Cadillac Co., auto sales and service building addition, Sarah and Laclede, $70,000.
ST. LOUIS — Mayflower Sales Co., alterations to buildings, $27,500.
ST. LOUIS—Roy McLanahan, garage and repair shop, 7001 Southwest, $10,000.
ST. LOUIS — Mississippi Valley Last Co., addition to factory, $20,000.
ST. LOUIS — Missouri Roofing Co., warehouse, 2521 Texas Ave., $10,000.
ST. LOUIS—Nixdorf-Krein Manufacturing Co., warehouse 1617 N. 10th., $14,400.
ST. LOUIS—Kreck Management Co., warehouse and office, 511 S. Boyle, $325,000.
ST. LOUIS—Schultz Investment Co., factory addition.
ST. LOUIS — Frank L. Thompson, truck terminal, 13th. and Papin.
ST. LOUIS—John Turner, service station, 7733 Ivory, $10,000.
ST. LOUIS—U. S. Atomic Energy Commission, addition to storage, 45 Destrehan, $40,-000.
ST. LOUIS—Wagner Electric Co., one-story addition to factory, 2016 St. Charles St., $40,-000.
UNIVERSITY CITY — David A. Clements, office and store room, 3994 Sarpy, $18,000.

NORTH CAROLINA

CHARLOTTE—Atkinson-Norfleet, Inc., expansion program.
CHARLOTTE—Boggs and Havnaer, warehouse and sales building on Thrift Rd. near Stewarts Creek, $34,000.
CHARLOTTE—City, gas mains and appurtenances for Duke Power Co.
CHARLOTTE—Harrison-Wright Co., Inc., building, $80,000.
CHARLOTTE—O. D. Hutchens, Grapette Bottling plant, $60,300.
CHARLOTTE—Jefferson Standard Broadcasting Co., television for its outlets WBT, WBT FM, $500,000.
CHARLOTTE — Leading Embroidery Co., acquired two warehouses corner Drum and Beryhill Sts.
CHARLOTTE — Ross and Witmer, Inc., building on west Morehead St., warehouse with office space in front, $100,000.
CHARLOTTE—Leon Salkind, North Bergen, N. J., acquired Calvin Mill, plant expansion program, $300,000.
CUMBERLAND — Rockfish-Mebane Yarn Mills, Inc., alterations and addition to mill building.
GASTONIA—Reagen Spinning Mill, addition and alterations to building.
HIGH POINT—Carolina Coach Co., bus station, west Broad and Lindsay Sts.
HIGH POINT—Slane Hosiery Mills, addition on Mangum Ave. between east Green and east Russell, $15,000.
KERNERSVILLE — American Furniture, Inc., additional plant and $10,000 for improvements.
LENOIR—Shuford Mills, Inc., remodeling old cotton mill plant, and installing new machines.
LEXINGTON—Davis Frozen Foods, Inc., addition.
LEXINGTON—Louden Manufacturing Division of Standard Brands, egg cracking plant.
RALEIGH—Burlington Mills, Inc., textile finishing plant 10 miles north of Raleigh on Neuse River $3,000,000.
ROANOKE RAPIDS — Halifax Paper Co., paper plant plus chemical recovery unit, $1,500,000.
SHELBY—Hudson Hosiery Mills, addition to plant, and installation of new machinery.
STUMPY POINT—C. C. Crockett of Maryland, establishing a canning factory.
VALDESE—Waldensian Hosiery Mills, Inc., modernization and expansion program, $733,-000.
WILMINGTON—E. B. Bugg, auto sales and service plant, and storage garage, $90,000.
WILMINGTON—Sunshine Laundry, laundry building.

OKLAHOMA

DRUMRIGHT — Central Chevrolet Motor Co., expansion program, $150,000.
DUNCAN—Sunray Oil Corp., recently completed topping unit, will also produce gasoline, distillate, gas and oils.
GRADY COUNTY—Cities Service Gas Co., gas lines from Gutherie to Drumright compresser station, $1,490,683.
GUTHRIE — Oklahoma Furniture Manufacturing Co., spring department.
HUGO — Choctaw Agstone Co., phosphate mill.
LAWTON—Consolidated Gas Utilities Corp., warehouse and shop buildings.
LAWTON—Jake Witzel, Ford building, 3rd. and B, $150,000.
MUSKOGEE—W. and P. Milling Co., livestock and poultry feed milling plant.
NORMAN — Gilt Edge Dairy Co., dairy plant addition, $80,000.
SAPULPA — Clarence F. Hutches, leased storage building of Southern Ice Co. for concentration of pecans.
SEMINOLE—Seminole Packing Co., plant expansion.
STIGLER — Southwestern Bell Telephone Co., installation of new dial system, $100,000.
TONKAWA—Continental Grain Co., grain elevator, $40,000.
TULSA — Radio Station, KYUL, 100 foot tower.
TULSA—Oklahoma Material and Wrecking Co., lumber shed, Fourth St. and Norfolk Ave.
TULSA—A. K. Perram Co., corrugated mat plant erected.

SOUTH CAROLINA

ANDERSON—Harry Osteen, assembly plant for manufacture of patented turn-stiles.
ANDERSON—Otteray Textiles, Inc., rayon weaving plant building to be erected, $1,-000,000.
CHARLESTON—Bris-Bois Candy Co., new machinery.
CHARLESTON—Crane Co., plant for distribution of plumbing supplies.
CHARLESTON—Gottfried Organ Co., two plants and additional ground for expansion.
CHARLESTON—Lefley and Haven, shop and office.
CHARLESTON — Purity Dairy and Ice Cream Co., acquired new plant.
CHARLESTON — Stewart Boats, leased space in Stark area.
CHESTER—Springs Cotton Mills, acquired land on outskirts of Baldwin Station for plant.
CONWAY—Horry Ice Co., 40 ton ice plant.
FOUNTAIN INN—Riegel Textile Corp., acquired Virginia Manufacturing Co.
GREENVILLE—Ely and Walker Dry Goods Co., acquired Poe Manufacturing Co., plant which operates spindles and looms on print cloths and tobacco cloths.
GREENWOOD—Piedmont Shirt Co., factory, about 20,000 square feet of floor space.
GREENWOOD—Air Engineering Co., installation of air conditioning apparatus in Mathews Mills, Greenwood Mills, and 96 cotton mills, $550,000.
GREER—Piedmont Shirt Co., building and installation of more machinery, $100,000.
PENDLETON—Deering, Milliken and Pacolet Manufacturing Co., new mill for production of filament rayon cloths to be twisted and woven on machinery of new design, Anderson Rd. north of Boscobel, $4,000,000.
RIDGE SPRINGS—Ridge Peach and Vegetable Association, office and warehouse building, $23,542.
ROCK HILL—J. P. Stevens and Co., N. Y., acquired Industrial Cotton Mills Co., now operating.
SUMTER — Johnson Shirt Manufacturing Co., shirt factory, $80,340.
SUMTER—Korn Industries, office building.
UNION—Monarch Mills, main office building.

TENNESSEE

East Tennessee Natural Gas Co., pipe line from middle to east Tennessee.
JOHNSON CITY—Henry I. Gaines, build-for Royal Crown Bottling Co.
JOHNSON CITY — Gordon's, Inc., factory building, $40,000.
KNOXVILLE—Henry I. Gaines, building for Royal Crown Bottling Co.
LOUDEN—Charles H. Bacon Co., expand factory and creamery, $55,000.
MEMPHIS — Art-Bilt Manufacturing Co., property 440 N. Decatur St., furniture specialties.
MEMPHIS — Buckeye Oil Co., purchased plant from W.A.A. research program, cellulose development, $100,000.
MEMPHIS—R. Cluck Floor Co., erect building.
MEMPHIS — Chuck Hutton, parts warehouse and shop building, 1100 Monroe Ave., $120,000.
MEMPHIS—R. E. Shuler Co., building on Jefferson, floor finishing machines and supplies.
NASHVILLE—Downtown Parking Garage, addition of floor at 144 5th. Ave., $87,000.
NASHVILLE—Franklin Limestone Co., alterations and repairs to office and warehouse, 10th. and Crawford, $10,000.
NASHVILLE—Methodist Publishing House, reroofing factory building, and constructing warehouse and office building.
NASHVILLE—Post Sign Co., repair fire damage, 1309 Grundy St., $15,000.
OAK RIDGE — General Electric Co., unit

(Continued on page 50)

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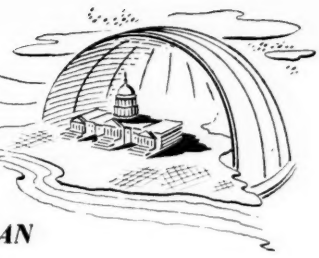
Potomac Soundings



by LAWRENCE SULLIVAN

Another Boom Year

All reputable economic forecasts for 1948 anticipate a boom year—better in most respects than 1947.

Demand for steel will be greater than during 1947, first because of expanded construction, second because of greater export demand, third because of larger production of autos, farm equipment, and industrial machinery. Scrap and coke will be the limiting factors in steel production, which the industry estimates at 86-million tons for the year, against 84-million tons in '47.

Construction is expected to hit a new all-time record high, in the neighborhood of $15-billions, against $13-billions last year.

Export demand in the first half of the year likely will carry all basic commodity prices to new highs.

The auto industry has scheduled 5,500,000 new cars and trucks, an increase of about 10 per cent over 1947 production.

A new round of 10 per cent wage increases in the first quarter is anticipated in all the heavy industries, save coal. These increases will be covered in part by better productivity per wage dollar, in part by lower profits margins, and in part by higher prices.

Petroleum will be in easier supply, with new refining facilities coming into production in the first half.

Lumber has about caught up to current building demand. Retailers now have better supplies. Housing will flow along more smoothly, with 90-day completions again in the picture in spring, instead of the 150- to 190-day completions experienced during 1946-47.

Although the banking community is alert to the dangers of too rapid credit expansion, there is slight prospect of drastic curtailment of legitimate business credits. Consumer credits will be policed, but not controlled.

Total employment for the year will average as good, if not slightly better than 1947, with shortages apparent in the middle quarters, when construction and agriculture make their peak seasonal demands upon the labor market.

Gross spending for the year is estimated close to $250-billions, against $240-billions in '47, and $100-billions in 1940.

Total government spending, local, State and Federal, will be approximately 4% above 1947.

Federal tax reduction is in serious economic difficulties, with another presidential veto in prospect. Foreign aid, plus higher prices across the boards at home, probably place reduced Federal taxes at least another year forward.

Luxury lines, including entertainment, are the traditional hall marks of a deflationary turn. In these lines, the turn was definitely marked in late '46. Other lines on the fringe of the luxury category will join them in '48, notably household gadgets.

Today's continuing inflation pressures come from savings—to be spent on housing, autos, and capital equipment. The deflation pressures already at work are in the sadly stretched household budgets of the fixed-income groups. These two opposing forces are about equal in the final national equation—but they register roaring boom in some lines, as housing, with recession in others, as furs, travel, and entertainment.

Political Interlude

Presidential politics this summer will hold more than ordinary significance as a guide to business prospects for the last half. It is axiomatic in American affairs that no turn from inflation to deflation ever comes without clear advance signals from the political arena. The new year, 1948, marks the fifteenth consecutive year of our inflation cycle—the longest in economic history for a modern industrial nation.

Washington leans back in easy confidence that President Truman will be the Democratic nominee. Jim Farley of New York is the best bet for vice-president, not only because the former Postmaster General draws much water in New York, whose 47 electoral votes may be decisive next November, but also because President Truman is searching earnestly for a practical political helmsman to steer through the campaign shoals. Well disposed and endowed with all the sound and gracious instincts of a polished after-dinner speaker, President Truman yet finds himself dismayed by the cerebrations of his hold-over New Deal thinkers in the Council of Economic Advisers, the Department of Agriculture, the Department of Labor and the Department of State. Mr. Farley, on the other hand, would be precisely the sort of fellow to examine a thousand-page typewritten report on "The Need for a 35-hour Work Week" and tell the Thinkers what should come ahead of it in September or October.

With the woods literally full of aggressive Republican candidates, the nominee won't be indicated until the Midwest primaries are cleared, early in April. The principal pre-convention preference polls, in Wisconsin, Illinois, Ohio, Nebraska, and South Dakota, will narrow the field to perhaps four real contenders before the Philadelphia convention, in June.

Major interest among party moguls on Capitol Hill centers in the showing to be made by General Douglas MacArthur in the Wisconsin primary. A landslide there might alter drastically the Philadelphia prospects.

MacArthur's friends anticipate he will return to the United States early in spring. If the political winds blow strong from Wisconsin, the General will be the No. 1 Dark Horse at Philadelphia.

House Speaker Joseph W. Martin, of Massachusetts, fresh from a triumphal appearance before Washington's famous Gridiron Dinner last month, stands high in the political winter book for second place on the G.O.P. ticket, should the MacArthur movement develop into a real convention bid.

From the business standpoint, the final result of all these pre-convention maneuvers will be significant chiefly as the nomination may bear on prospects for continuing or slowing down the fifteen-year inflation merry-go-round.

Budget Cuts Negligible

With national defense, veterans care, debt service, and foreign aid scheduled to show increases in the new fiscal year, beginning July 1, 1948, there appears little prospect that the federal budget will bring deflationary forces into play during the calendar year 1948.

The new budget allocates less than 20 per cent of the total spending to those functions which are called the ordinary operations of the federal establishment—the non-military departments. The remainder of more than 80 per cent is allocated to national defense, veterans, interest on the national debt, foreign assistance, and tax refunds. Since there is little disposition in Congress to pare these major items, the economies to be realized, if any, are restricted to those so-called "regular" items which, combined, make less than $10-billions of total federal spending.

The table below compares the principal budget items for 1940 and 1948, in billions of dollars:

(Continued on page 18)

Potomac Soundings — *by Lawrence Sullivan*

Item	1940	1948
National defense	1.5	10.4
Veterans Affairs	0.5	7.5
Interest on national debt..	1.0	5.1
International assistance .	0.05	4.3
Tax refunds	.09	2.1
Total 5 items	$3.14	29.4

Thus, we have roundly $30-billions of federal spending before we even approach the regular departments—the Post Office, Agriculture, Interior, Labor, Federal Security, Interstate Commerce Commission, Federal Works. All "regular" items cost $6.1-billions in 1940 and $7.6-billions in 1948. Yet it is only in this area that legislative paring is possible without a fundamental change in national policy, such as would be required to effect any reduction in the five major items of expenditure.

If every item in the so-called "regular" budget were cut back arbitrarily to the 1940 figure, the total reduction would be in the neighborhood of $1.5-billions. While this is not a negligible amount, and would be well worth while if accomplished, that saving still would not have any appreciable influence on the general level of business, as influenced by the scale of government spending. Weighed as a factor in the over-all business outlook, therefore, the federal budget confirms those forecasts which anticipate another boom year.

Bureaucracy Triumphant

The wonders of bureaucratic gobbledygook are neverending, but the Bureau of Internal Revenue marks a new high in a recent ruling that airlines, as taxpayers, may be required to keep one set of books for tax purposes, and another set for government reporting under regulations of the Civil Aeronautics Board. Should the principle be extended to all business operations, the day may not be far distant when every firm may be required to keep two sets of books, one for tax audits, another for checking requirements of other federal regulatory agencies.

In the tax case, National Air Lines kept its books strictly in accordance with C.A.B. requirements. In June, 1944, C.A.B. directed a change in method, to segregate receipts for which no service yet had been rendered—(advance ticket sales). National Air Lines twice requested permission of the Bureau of Internal Revenue to make the accounting change demanded by C.A.B. Both requests were rejected by B.I.R.

Forced to a choice, the company determined at length to adopt the revised C.A.B. procedure, and reported income for both 1944 and 1945 on that basis. But the tax auditor rejected the deferred income items, as so reported, amounting to $21,207 for 1944 and $67,357 for 1945. In this, B.I.R. was sustained by the Court of Tax Appeals, on the ground that the law vests in the Commissioner of Internal Revenue full authority to prescribe tax accounting methods, even when "hardship might have been involved in the requirement of using different accounting methods for different government agencies."

Critical Oil Shortage

Emergency action to ration short supplies of petroleum products throughout the South has spread rapidly along the entire Atlantic seaboard. In most cities, the oil supply, including gasoline, measures roughly 80 to 85 per cent of normal consumption.

Congressman Monroe M. Redden of North Carolina reports that Asheville and Charlotte have mobilized locally to ration supplies on a community-wide voluntary basis.

"I am advised that some of the American tankers are transporting oil to foreign countries this very day, and that others are being loaded in the docks for that purpose," Congressman Redden reported on December 17. "This is not fair treatment to the people of this country, and it should not be tolerated by the government. . . . It just does not make sense for us to ship our products to other lands while our people at home subject themselves to the discomfort and dangers of winter weather. I appeal to the Members of the House to unite in a common effort to see that fuel is made available at once to the American people."

Because of recent increases in fuel oil prices, Jacksonville, Fla., finds itself with a deficit of approximately $500,000—the difference between the current price of fuel and the original estimated price. Fuel oil was moving at $2.98 a barrel, Jacksonville, the last week of December. This compares with 76 cents a barrel in 1939, $1.66 in 1943, $1.83 on January 1, 1947, and $2.45 on November 20, 1947. Several Florida electric companies have been compelled to curtail production for want of fuel oil.

Official reports from the U.S. Maritime Commission reveal that 470 surplus tankers have been disposed of since March, 1946. U.S. operators got 258 of these ships, and 212 went to foreign operators for oil runs to other lands. The resulting shortage of tankers available to U.S. oil companies is the primary cause of the fuel oil shortage along the coast.

Because of abnormally severe weather in New England during December, the shortage there has aroused widespread public indignation. Commerce Department officials deny to Congress and the press exact figures on exports of petroleum and its products since last August.

Fifty decommissioned government tankers are being hastened through reconditioning at various shipyards, to be ready for service by mid-February.

Both the Army and Navy have been directed to suspend stockpiling of petroleum products during the peak consumption season, until March 15.

The blundering policy which delivered 212 oil tankers to foreign operators during the last 18 months is the heart of today's grevious fuel oil shortage. There are not enough tankers available to deliver needed supplies to any important coastal city. Doubtless similar error will recur in other items, until Washington adopts a firm policy of placing America's domestic needs ahead of foreign requisitions.

Labor Rackets

Feather-bedding and restrictive practices by organized labor are the principal cause of sky-rocketing building costs, says the first interim report of the Gwinn Committee, which has been investigating restrictive labor practices since last June. Gwinn's report was submitted to the House on December 18 (*Congressional Record*, page A-5190).

"In nearly all of our big cities union bosses determine where and when the building craftsmen shall work, if at all," the Gwinn Report charges. "They arbitrarily limit the number who may join the union. That makes workmen scarce and forces wages up. No one can work on new construction unless he belongs to a union. That makes the monopoly of workers complete. To exclude new craftsmen and apprentices from their city is one of the regular functions of many unions, in order to maintain high prices. They prohibit incentive payments for high individual production. . . . The extraordinarily good and conscientious workman gets no more than the dullard and the slacker. By killing off the pride and the incentives of good craftsmanship the labor monopoly fastens upon society the dead level of mediocre performance."

Because the labor unions systematically limit and discourage apprentices, there are today about one-million fewer building tradesmen in the U.S. than 25 years ago. Although a competent plasterer can be trained and qualified in six months by the Army or Navy, the labor unions keep a young beginner in apprentice status four to six years. Eventually, he becomes discouraged and turns to some other calling.

End of Morganthau Plan

The collapse of the London peace conference last month was no surprise to informed diplomatic quarters anywhere in the world.

However dismal the outlook for world unity and cooperation at the moment, London did accomplish one step which had to be taken somewhere along the line, namely, the complete and unequivocal liquidation and abandonment of the senseless, shameless Morganthau Plan to reduce Germany to a primitive, pastoral state. This was the essence of the peace arrangements agreed to by President Truman at Potsdam in July, 1945.

So long as the Morganthau Plan remained at the hub of American policy in Europe, Russia held out a real appeal to considerable segments of German opinion, with the mere promise that at least a part of prewar Germany would be sustained as

(*Continued on page 52*)

LITTLE GRAINS OF SAND

"Little drops of water, little grains of sand,
Make the mighty ocean, and the pleasant land."

Loss of public confidence in an election year is a strong restraining influence on labor union leaders which will hold them back from active strife during 1948. All of the labor bosses especially the most arrogant, who incidentally, are the most vulnerable, are united in their desire to defeat the sponsors and supporters of the Labor-Management Relations Act and by so doing pave the way for its repeal. The moguls of the mobs are more interested in playing politics to save their own hides than they are in representing the men whose dues pay their salaries.

A proposal to require Federal Reserve Banks to hold reserves of gold equal to 40% of their outstanding note issue, and gold and lawful money equal to 35% of the deposits of commercial banks with the Reserve banks would serve as notice to our citizens who bought and now own government bonds that their government intends to try to pay the interest and principal on these bonds in dollars that have not been cheapened. It would serve as notice to the other nations of the world that the United States intends to maintain a sound currency. It would also help to check inflation by reducing the number of dollars that clamor to be exchanged for goods.

The Internal Revenue Bureau has issued a recent statement which tends to provide assurance to corporate taxpayers against capricious or inequitable application of section 102 of the Code which applies to undistributed profits of corporations. The Bureau's new statement declares it to be its policy to give due consideration to the opinion and judgment of a corporation's own management as to amounts needed for working capital, replacement or expansion of plant and facilities, sinking fund for the retirement of fixed obligations and other bona fide business needs.

The restoration of government controls over installment credits seems like an innocuous piece of anti-inflationary legislation, but there is a real argument that should be advanced against it, namely the precedent it sets. If the government can tell Mary Smith that she can not borrow money to buy a vacuum cleaner, will it later claim the power to tell her husband John that he can not borrow money to use in establishing or expanding a vacuum cleaner factory?

An example of the destructive work being done by the social termites who infest our bureaucracy is offered by the following quotation from "Common Human Needs," Public Assistance Report No. 8 of the Federal Social Security Board, Federal Security Agency, *"Social Security and public assistance programs are a basic essential for attainment of the socialized state envisaged in democratic ideology, a way of life which so far has been realized only in slight measure."*

In our free economic system the consumer is supreme. It is impossible to restate this truth too often because it is the keystone of the system itself. The attitude of the business barons of the latter part of the 19th century, expressed in the phrase "the public be damned," has been replaced by the two words "public service" in recognition of the fact that consumers—the public—is all powerful. Unless labor union members learn this lesson quickly and teach it to their padrones (or replace the padrones with representatives) organized labor will find that it will be traveling on a very rocky road.

RATION BOOKS . . . IN THE HANDS OF THE PROLETARIAN STATE ARE THE MOST POWERFUL MEANS OF CONTROL . . . A POWER UNPRECEDENTED IN HISTORY . . . A MEANS OF COMPULSION STRONGER THAN THE LAWS OF THE CONVENT AND THE GUILLOTINE.
—LENIN.

The fate of the American synthetic rubber industry not only depends on further scientific progress but also on the future course of the crude rubber industry in the orient. One of the most important factors in the latter is whether or not the International Trade Organization will be able to prevent a revival of the prewar rubber cartel which was one of the chief factors in our failure to create and maintain an adequate rubber stockpile. It is quite clear, however, that the ultimate goal of the rubber industry should be to maintain a free and independent American rubber industry which will need neither subsidies nor the crutches of end-use controls.

Eighty-two thousand new dwellings were started in November, according to the Bureau of Labor statistics. These represent a gain of 72% over the same month in 1946 when the Federal government was trying desperately by its use of regulatory "aids" to stimulate home building. Not only is this figure encouraging as an indication of progress made but there is every indication that it will be dwarfed in 1948. In addition it is interesting to note from figures from the same source that new dwellings started in two-family and multi-family structures accounted for 15% of all non-farm housing begun in October as compared with 11% last January.

(Continued on page 22)

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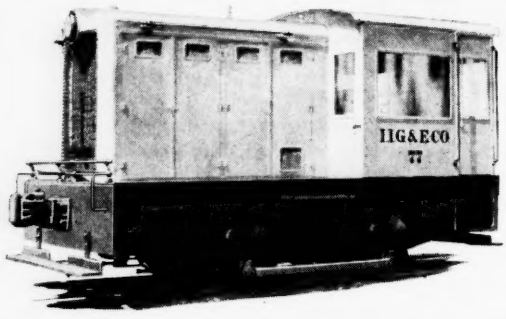

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DAVENPORT LOCOMOTIVE WORKS

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(Continued from page 21)

All over the world, including the United States, governments are doing those things that create inflation and then trying to push back and repress the effects of inflation. The idiocy of this course shows most clearly in Great Britain, where a people badly fed, badly housed and without fuel are taxed more because they have too much money.

The life insurance companies of the country put an estimated $2,500,000,000 into the purchase of real estate mortgages during 1947, the Institute of Life Insurance reports. The total mortgage holdings of the life companies rose by nearly a billion and a half dollars to approximately $8,500,000,000, the greatest volume of mortgage financing ever extended by the life insurance business. A large part of the 1947 mortgage financing of the life insurance companies was in Veterans Administration mortgages for veterans' housing under the G. I. Bill of Rights.

Steel production in 1947 will be far greater than in any previous peacetime year. The total is expected to be around 84,000,000 tons, on the basis of operations through October. That very large amount of steel supported accelerated operations by manufacturing plants all over the nation, enabling more people to work than ever before in the history of the United States.

The 1947 output of ingots and steel for castings will thus exceed the previous peacetime high production of 1946 by approximately 17,000,000 tons. It is likely that the year now closing will result in the establishment of at least eleven new records for shipments of specific steel products.

There was a three hundred per cent increase in the production of domestic freight cars during 1947. For the first quarter of the year deliveries averaged 2,717 cars a month; in November the figure was 8,938. Production was increased steadily throughout the year in proportion to the availability of steel and other materials.

The car builders' program for the first half of 1948 calls for a further increase in freight car production with rising delivery rates as high as the steel situation permits. On the basis of the metal now believed to be assured, it is hoped that in the months immediately ahead production will amount to 10,000 cars monthly. If a higher rate than that is to be attained, new planning regarding the rolling of freight car type steel will be necessary.

Farm equipment makers plan record production next year. The dollar volume of their output in 1947 amounted to $1,250 million and leading companies are aiming at boosts of 10% to 20% in unit volume in 1948. Production next year is expected to exceed $1.5 billion, compared with a pre-war peak of $670 million. Despite rising output, the demand for farm machinery is so great that few items are available for immediate delivery.

Price controls are legalized plunder. When some use their voting power to get more goods by paying fewer dollars, they force others to take fewer dollars by giving up more goods.

From the standpoint of economics, price fixing is equally a fake. Canadian and French and Argentine farmers have already curtailed wheat planting because of price fixing. To expect anyone to produce as much of anything for a price less than a free market would give, is a confession of economic illiteracy. It has never been done without bayonets, and poorly then.—Samuel B. Pettingill.

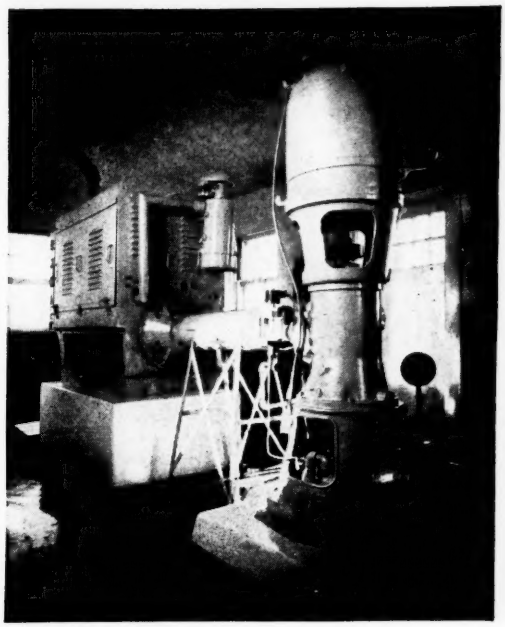
Current indications are that a determined fight will be waged during the coming session of Congress for outright repeal of Federal licensing restrictions on margarine manufacture and sale, and that proponents of repeal will at least be able to secure tax exemption for margarine made from domestic fats and oils. Such a victory on the national front, it is believed, would be the forerunner of a successful drive for the repeal of margarine tax and license laws by many of the States.

The single most important thing that western European nations could do to stimulate production and trade would be to devalue and make their currencies freely convertible into other currencies. Italy recently did this. Almost all of the other currencies are now over-valued in relation to the dollar. They have fixed rates, for conversion into the dollar and into each other, that are completely unrealistic. International trade, and production, both would be enormously stimulated if the currencies were allowed to find their true levels.

"American railroads handled in 1947 the greatest peacetime traffic in history," according to William T. Faricy, president of the Association of American Railroads. "They did it with an efficiency never before attained. But even so, the rate of return they earned was much less than in earlier years when the volume of business was smaller than in 1947. Results of 1947 operations point up the two great problems for the year ahead. One is to restore a balance between income and outgo. The other is to secure an increase in car supply. Both are necessary to maintain rail transportation adquate to the nation's needs."

Half of all the equipment of the cotton textile industry is over-age and needs replacement, according to a survey by Textile Information Service. This replacement would cost over $1 billion, or over twice the cost of original equipment.

Textile mills are said to have fallen behind in replacing worn and out-moded machinery because of small or no profits during the 1930's, inability to obtain machinery during the war years, and the heavy strain on existing machinery during those same years, the report said. Machinery expenditures by the cotton textile industry in 1947 will exceed $150 million. Estimated expenditures for the next five years run as high as $200 million annually.



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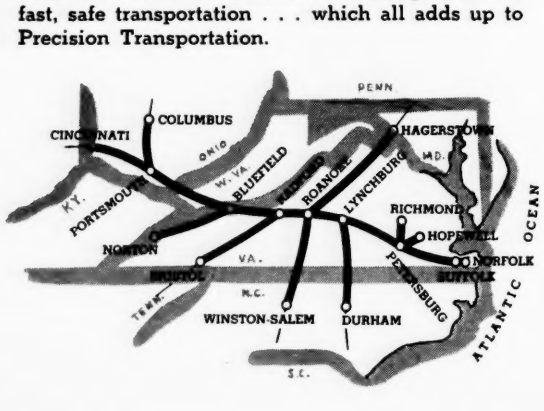

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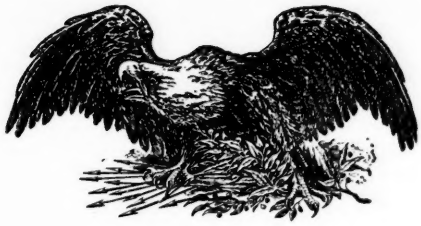


"What Enriches the South Enriches the Nation"

22nd Amendment

The 16th Amendment to the Constitution gave the federal government power to confiscate arbitrarily the private property of citizens through direct taxation on personal incomes and estates. Unless drastically curbed, present exhorbitant income and inheritance taxes will not only destroy individual business initiative but will lead to state socialism. England affords positive proof of the fact that free institutions can not survive the unlimited power of governments to tax the successful few when that power is exercised by a government elected by the many.

Amendments to our Constitution protect the citizen in his life, liberty and freedom of expression and of worship. If our way of life is to be perpetuated it is essential that it also protect him in his right to own and keep his property when honestly possessed.

Most of the state legislatures meet on January 2nd. Every legitimate influence should be exerted to have each legislature adopt a resolution similar to that which follows, a resolution that has already been passed by three Southern states among others. If this resolution is passed by a large majority of the states (and there is every reason to believe that it can be) the movement for the passage of a 22nd amendment will become irresistible and Congress will be virtually compelled to submit it to the states for ratification.

RESOLUTION

Memorializing the Congress of the United States of America to propose an Amendment to the Constitution of the United States Relative to Taxes on Incomes, Inheritances and Gifts.

RESOLVED by the Senate and House of Representatives of the State of ————————.

That the Congress of the United States of America be and it hereby is requested to propose the following article as an amendment to the Constitution of the United States:

"ARTICLE ———

"Section 1. The sixteenth article of amendment to the Constitution of the United States is hereby repealed.

"Sec. 2. The Congress shall have power to lay and collect taxes on incomes, from whatever source derived, without apportionment among the several states, and without regard to any census or enumeration. The maximum aggregate rate of all taxes, duties and excises which the Congress way lay or collect on, with respect to, or measured by, income shall not exceed 25 per centum: provided, however, that Congress by a vote of three-fourths of each house may fix a rate in excess of 25 per centum, but not in excess of 40 per centum, for periods, either successive or otherwise, not exceeding one year each. In the event that the United States shall be engaged in a war which creates a national emergency so grave as to necessitate such action to avoid national disaster, the Congress by a vote of three-fourths of each house may, while the United States is so engaged, suspend, for periods, either successive or otherwise, not exceeding one year each, such limitation with respect to income subsequently accruing or received.

"Sec. 3. The Congress shall have no power to lay or collect any tax, duty or excise with respect to the devolution or transfer of property, or any interest therein, upon or in contemplation of or intended to take effect in possession or enjoyment at or after death, or by way of gift.

"Sec. 4. Sections 1 and 2 shall take effect at midnight on the 31st day of December following the ratification of this article. Nothing contained in this article shall affect the power of the United States after said date to collect any tax on, with respect to, or measured by, income for any period ending on or prior to said 31st day of December laid in accordance with the terms of any law then in effect.

"Sec. 5. Section 3 shall take effect at midnight of the day of ratification of this article. Nothing contained in this article shall affect the power of the United States after said date to collect any tax with respect to any devolution or transfer occurring prior to the taking effect of Section 3, laid in accordance with the terms of any law then in effect."

And be it further

RESOLVED, that the Congress of the United States be, and it hereby is, requested to provide as the mode of ratification that said amendment shall be valid to all intents and purposes, as part of the Constitution of the United States, when ratified by the legislatures of three-fourths of the several states; and be it further

RESOLVED, that the Secretary of State be, and he hereby is, directed to send a duly certified copy of this resolution to the Senate of the United States and one to the House of Representatives in the Congress of the United States.

Socialism by gradual evolution is a greater domestic danger than is communism by revolution. The 16th amendment is the constitutional leak in the dyke that permits and encourages socialization of capital wealth. This leak must be plugged up.

"It is later than you think."

Standardize Economic Facts

As the final work on the 1948 *Blue Book of Southern Progress* is being done, some very significant revelations are apparent in the material that has gone into its wide range of facts and figures.

Outstanding among these is evidence of growing interest by Southerners in the progress of their region. More data than ever before have been contributed by other than Federal Government sources. Inquiries and suggestions in great number also have been received, to prove conclusively that interest is stronger regarding economic gains being made from year to year than at any time in the past.

Not least among those showing such interest are numbers of people in state government positions. This tendency on their part promises greater enlightenment in state government circles with regard to economic affairs; and it assures greater cooperation of state government with business in achieving an atmosphere within which production and employment can flourish.

This year, a large part of *Blue Book* textual matter, pertaining to the individual states, will come from individuals holding official positions. Many of the new computations and surveys that will appear in the forthcoming issue could not have been developed in their present fullness without the cooperation of these same officials.

There are many thoughtful persons within each of the states, business executives to public servants, who are asking the question:

"Where do we go from here?"

And all seem to realize the commonsense fact that such a question cannot be answered satisfactorily without first finding out:

"Where are we today, and where have we been up to now?"

A clear prospectus of the future is projectable only from facts of the present and past. Plans can be made intelligently only when known basic facts are present to give them foundation and substance.

For many years, state officials, and particularly Southern state officials, have been content to let the Federal Government hold a monopoly on data and statistics, many of which are primarily state affairs. Ofttimes the result has been dissemination of facts that were useless so far as regional or community purposes were concerned.

It gives Arkansas or Mississippi, for instance, little enlightenment to know that certain changes are current or impendent in the nation as a whole, or that they are occurring in regions with entirely different problems and objectives. What each state or community needs to know, to make progress, is that which is happening in its own yard, front and back; and such knowledge is best predicated upon facts that the states and communities have themselves assembled, and for the accuracy of which they can vouch.

Some Southern states can be credited with having made outstanding strides in the right direction. They have set up integrated and well organized agencies and departments that know what is going on in their states; what the possibilities are for the future; and how best to take advantage of those opportunities. From these states economic facts are now available in greater diversity, and of greater usefulness than from many other states that have a longer history of industrialization. Upon these Southern states the *Blue Book* and MANUFACTURERS RECORD rely heavily in surveys that disclose the actual conditions of the present, and serve as guideposts for the future.

In other Southern states, however, considerable progress in this direction remains still to be made. And the point should be made that the states that give least attention to vital facts and conditions show the least in the way of progressive development.

The day may come, and it will be a profitable day for the South, when the Governors of all the 16 Southern states will become aware that a great opportunity for service to their commonwealths lies within their grasp. On that day they will work out and agree on a form of statistical agency, individual for each state, but coordinated in form and activity, that will unify and dovetail the record of available facts pertaining to the region; and will be able to give advice to both business and government to the end of sustaining economic gains already made, and laying the groundwork for others to come.

As it is today, few of the states operate on a uniform system, the one with the others. The facts they gather and disseminate are diverse in character and difficult to compare. Some of the units are Planning Commissions, some are departments of the administrative branch of the government, some are quasi governmental in nature. In a number of instances each is doing an outstanding job, but as a whole they are not able to offer much of interchangeable value.

A uniform system, and a uniform set of objectives, definitely arrived at, and definitely pursued, would do a great deal to give Southern business, some of which operates in more than one state, the tool of knowledge that is so vital in determining the status of the present and in planning for the future.

Interest and cooperation accorded the staff of the *Blue Book* this year gives great hope that such coordinated effort may be in the making. It augers well for Southern progress in the future.

The hate of the Marxians and the Marxian liberals for advertising is no mere whim. If you believe that the purpose of making and selling things is to furnish people what they choose to have, advertising appears useful as an instrument to facilitate exchange. But if you believe that the mass of consumers are sub-human, bound to do something foolish and destructive if left to themselves; that there must be some superior power guiding them for their own good, advertising is a terrible thing. It is likely to cause people to want something and their wanting it may be troublesome to the higher authority.

—*Wall Street Journal*

Cost Accounting Facts and Fantasies - I

by
Paul T. Norton, Jr.
Associate Editor

TOP management would be well advised to reëxamine from time to time all of their operating and financial techniques, so as to determine whether there have been changes in conditions which make it desirable to make changes in such techniques. This is especially the case with such things as cost accounting, where good practice requires that the methods employed be tailored to fit the existing situation. The average specialist in fields like cost accounting is apt to be too close to the details of his work to make it possible for him to take the very broad view which is essential if his work is to be coördinated with other activities in a way that is to the best interest of the company as a whole. Of course, the same thing is true of other specialists, such as engineers and operating people, and it is the job of top management to see that all activities of the business are properly coördinated.

For various reasons, some of which will be given later in this article, it is believed that top management in the average company is doing a less effective job in supervising and controlling the company's cost accounting than is true of most other activities. This is probably due to a combination of circumstances. Operating personnel do not ordinarily understand cost accounting methods and are consequently not able to discuss such methods intelligently with top management even when the operating people believe that the cost accounting methods are not as good as they might be if they were changed. Cost accounting personnel often do not fully understand operating problems, especially those having to do with possible savings through increased investment in depreciating assets, and in addition are often too immersed in details to see clearly the broad objectives of their work. Finally, it is believed that top management itself is too apt to accept without question the cost accounting figures presented to it. This is the more surprising because if there is one thing that can be said definitely about cost accounting, it is that its results are never more valid than the assumptions on which the calculations are based.

This is the first of several articles in which certain general observations will be made about cost accounting and certain definite suggestions given for improving cost accounting methods under various situations. This article will include a discussion of several actual situations where an uncritical acceptance of cost accounting records produced impressions that were far from correct, and in the worst case of all, resulted in an action that was demonstrably incorrect.

Cost Accounting Assumptions

No matter what cost accounting method is used, it is generally assumed that the cost of manufacturing an article is the sum of three parts, generally designated as direct material, direct labor, and indirect overhead expense. Direct material and direct labor can generally be calculated with fair accuracy, although, as will be shown in a later article, costs are some times accepted without question which contain direct material and direct labor values that are far from correct.

It is impossible to calculate accurately the total indirect overhead expense, and even if the total indirect overhead expense could be determined accurately, it would be impossible to distribute this expense accurately among the various articles being produced. In any specific case there will be many different methods which might be used in distributing the indirect overhead expense, such as by percentage of direct material, by percentage of direct labor, by machine rate, etc. In the case of distribution by percentage of direct labor, the percentage used may be that for the entire plant or be calculated separately for each department. It is obvious that these quite different methods will in most cases give quite different values for the indirect overhead expense part of the cost of any individual article.

The first of a series on the subject, the accompanying article, develops the idea that the cost accounting problem is being handled badly in many companies, principally because neither the accounting personnel nor the operating personnel understand the problem as a whole nor how the efforts of each group should be coordinated. If this is really so, it is obvious that top management alone can remedy the situation. The article gives several illustrations of serious cost accounting errors and makes some general suggestions for eliminating such errors. Additional and more specific suggestions will be given in later articles of the series.

It is rarely possible to select a method of distributing indirect overhead expense that is both the most accurate and the least expensive to use; we generally try to find the method which will give reasonably accurate distribution with the smallest amount of complication and expense for the cost accounting system itself. In spite of the fact that all concerned must be aware of the fact that this compromise often gives costs which are badly out of line for certain articles, important decisions are often made without an independent analysis which might be expected to show whether the decision in question is based on sound information.

Example of Faulty Use of Expense Distribution

The information given in this example was obtained some years ago during a visit to a large furniture factory, operated by a successful company. The error described seems incredibly bad, but it is probably that somewhat similar errors, exist in a large number of companies. It is a cheering thought that companies which have managed to survive in spite of such errors may well improve their chances of meeting future competition merely by correcting such errors.

A tour of the factory revealed four carving spindles which had evidently not been used for some little time. In answer to a question, the manager stated that they had found that it was cheaper for them to buy their carvings than it had been for them to make the carvings on these spindles. Queried further, the manager stated that they did not buy their carvings from one of the companies specializing in the manufacture of such things, but that the same four men who had previously worked for them on the four idle spindles had gone into partnership and were making carvings for sale to the company in a rented room, using second-hand carving spindles which they had bought or rented. It further developed that these four men were making more money than they had previously made while working directly for the company, although they did not work any harder or produce any more carvings and were able to sell the carvings to the company for less than the carvings had apparently cost the company when made in its own factory.

When asked to explain this apparent paradox, the manager stated that it was all a matter of indirect overhead expense; that the expense rate in his large factory was 110 per cent of direct labor while the rate for the four men in their small operation was obviously much less. When asked further how his company had eliminated any considerable part of the expense previously charged against the cost of the carvings merely by purchasing the carvings instead of manufacturing them, the manager stated that this had bothered him somewhat but he had been assured by the company's accountants that their method of comparing the cost of manufacturing carvings with the cost of buying carvings was correct and that they really were saving money by purchasing the carvings.

Investigations made have convinced the writer that errors like that just described are very common, although he never expects again to find a situation where the error was so flagrant and should have been so apparent to everyone.

In most cases where a study is being made to determine whether to purchase an article which has previously been manufactured it is desirable to make some very careful calculations (quite outside the cost accounting system) in

order to determine how much total indirect overhead expense, if any, will be saved by purchasing the article. It is hardly possible that there are many cases where the saving in expense will be directly proportional to the saving in direct labor, as was so incorrectly assumed in this case.

Cause of the Error

Apparently the only person in any way involved in the change from manufacturing to purchasing who "smelled a rat" was the plant manager. He could hardly be blamed for not doing more than mildly to question the saving in expense; after all, cost accounting was not his responsibility.

Apparently no one connected with this company made the flat statement that for every dollar of direct labor that was saved there would be a saving of $1.10 in indirect overhead expense, but the action that was taken was certainly based on the all too common belief that an indirect overhead expense rate based on plant totals can properly be used to calculate the cost of each individual operation performed in the plant, even when there are great differences in the expense-labor ratios in the various parts of the plant. (Perhaps it would be more accurate to state that no one in the entire organization questioned the validity of using their cost accounting methods for a purpose for which these methods were not designed to be used.)

A common cause of errors of this sort seems to be a lack of liaison between the cost accounting personnel and the operating personnel. Costs are often merely figures on pieces of paper to each of these two groups because the cost accounting personnel do not understand the physical operations in the factory and the operating personnel do not really understand either what the cost accounting personnel are trying to accomplish or the methods they are using.

For the benefit of those readers who are not completely familiar with furniture manufacturing a brief explanation will be given to show why actual indirect overhead expense rates on the various individual operations differed so greatly from the average rate for the whole factory, which latter rate was used by this company in its cost accounting. (In a later article it will be shown that the method used by this company for cost accounting purposes was probably as good a method as could have been used, even though it resulted in the serious error now being discussed.)

The manufacturing operations of this factory were divided into a few main departments, such as the machine room, where the lumber from the dry kilns was machined into the proper sizes and shapes; the cabinet room, where these pieces were assembled, and the finishing room, where the assembled pieces of furniture went through the various finishing operations.

It should be obvious that the ratio of total indirect overhead expense to total direct labor was much greater in the machine room, which had a large investment in machines and used a great deal of power, than in either the cabinet room or the finishing room, although the total indirect overhead expense in the cabinet room and in the finishing room would be quite large if the cost of hardware and of finishing materials were charged as part of the total indirect overhead expense instead of as direct materials.

It should also be obvious that even in the machine room itself there are great differences in the actual expense rates for various operations. Not only is the indirect overhead expense per hour greater for expensive automatic machines than for the simple machines like the carving spindles of the example cited, but in addition, the simpler machines quite generally require operators having greater skill and earning higher hourly wages. Thus the machines having the lowest indirect overhead expense per hour are apt to have the highest direct labor cost per hour, and very much lower than average expense-labor ratios.

If the person who made the calculations which indicated that there would be a great saving in indirect overhead expense through purchasing these carvings had really understood both the purpose and limitations of the cost accounting system being used, he would surely have come to the conclusion that it was hardly possible that the actual indirect overhead expense could be much less for the four carving spindles operated as a separate business by the four men than it had been when the company was operating its own carving spindles.

Paul T. Norton, Jr.

In this particular case it should not have been necessary to make any sort of calculation to determine what the actual expense-labor ratio had been for the four carving spindles when they were operated by the company. The reader has probably long since become aware of the fact that under the conditions as stated it made practically no difference whether this ratio had been large or small or whether it was larger or smaller than would be the case for the carving spindles operated as a separate business by the four men.

The really significant fact in this particular case was that, no matter what the total indirect overhead expense had been, it was reduced by only an insignificant amount, if at all, when the company discontinued the use of the carving spindles. Such small items as power were eliminated and such things as supervision may have been reduced somewhat, but the larger items must have remained the same as before.

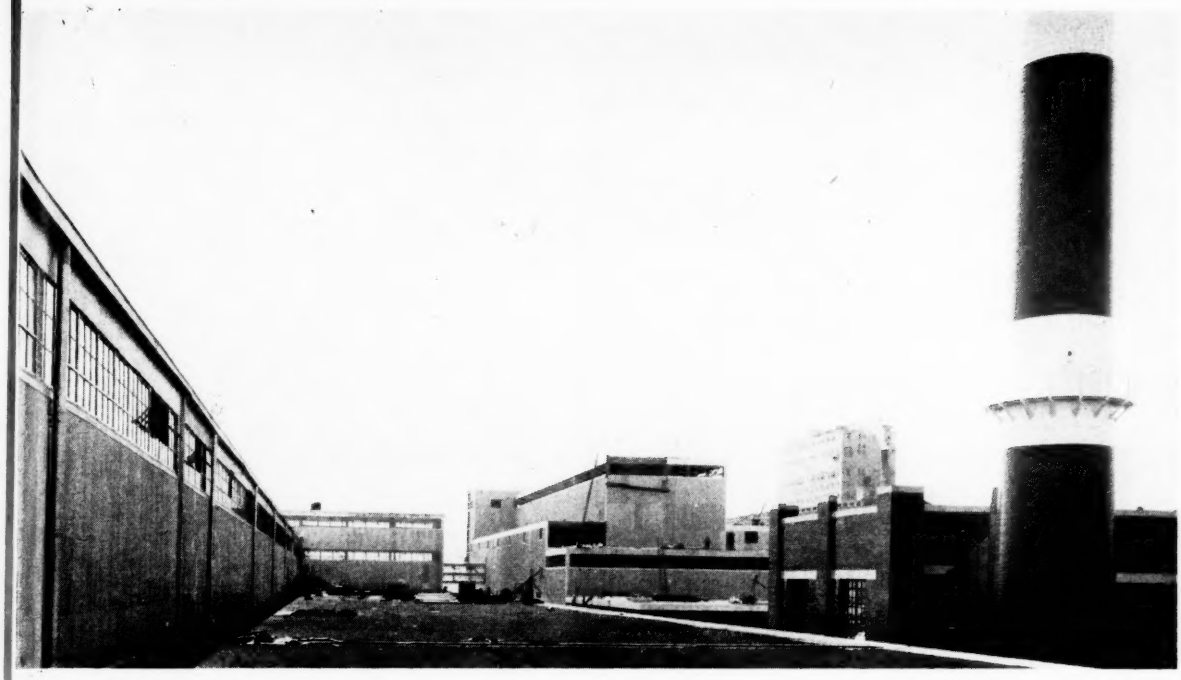
Apparently the company continued to use the same 110 per cent rate in distributing their indirect overhead expense, although the change must have increased this rate above 110 per cent by reducing the direct labor without substantially reducing the indirect overhead expense itself. Even at their high hourly rates these four men represented such a small part of the total direct labor payroll that the increase in the expense-labor ratio was probably less than the variations that would normally occur from month to month. Nevertheless, the increase in the ratio was there even if small, and if this sort of incorrect thinking caused the company to buy additional articles which it had been making the final result might well become very serious before the management became aware of what was happening.

Responsibility for the Error

The responsibility for the error discussed in the preceding paragraphs should be placed squarely on the top management of this company. It is true that the error should have been obvious to every person who had anything to do with the calculations of cost which were used in determining whether to purchase the carvings or to continue to manufacture them. However, it is futile to expect that clerks who handle routine cost calculations will know enough of the general over-all situation to make it likely that they will catch things of this sort. But it is certainly the responsibility of top management to see that somewhere along the line there is someone who is able to think things like this through to the proper solution and who is held responsible for finding the proper solution. These problems almost always require a knowledge of the problems of finance, accounting, and production. Representatives of each of these groups should take part in the calculations to be used in making the final decision, and the entire matter should be reviewed and approved by some responsible executive who is familiar with the entire problem. Such review and approval need not take much of the time of the responsible executive if the procedure is properly planned, but regardless of the time required this is the sort of decision which should be made on a rather high level.

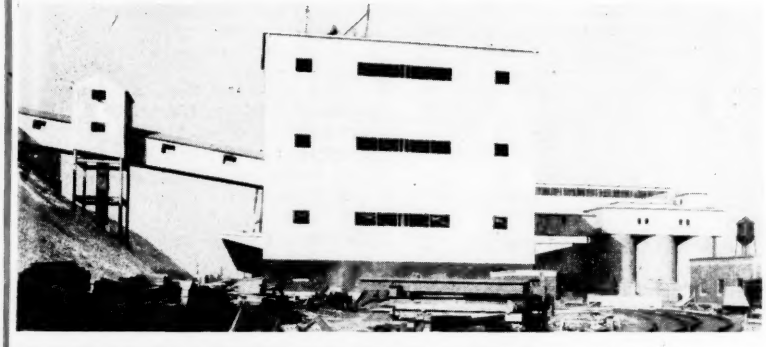
It is, of course, often desirable to purchase articles which a company has been manufacturing in its own factory. It is even possible that the company of the preceding example might have been able to purchase its carvings cheaper than it could make them. It is not possible, how-

(*Continued on page 53*)



Baltimore Gypsum Plant Starts Making Lath for Needed Residential Building

Above—Roof-top view of the new $4,500,000 National Gypsum plant, which last month started producing gypsum lath at Baltimore. The plant with part of its red and white painted stack, which is so painted because of its proximity to the nearby municipal airport.



GYPSUM lath in four-foot lengths is rolling off production lines in the new $4,500,000 Baltimore plant of National Gypsum Co. at the rate of 95 feet a minute, as the company carries on negotiations expected to result in construction of a $2,500,000 paper plant nearby.

A companion municipal project to the $1,500,000 gypsum unloading pier being completed as an adjunct to the big gypsum plant, the proposed paper mill would provide the facilities to make the heavy cardboard used as the outside layers of the sandwich-like gypsum lath, which has been in production for several weeks at the Baltimore plant.

The new gypsum plant is one of the most modern of its kind in the world.

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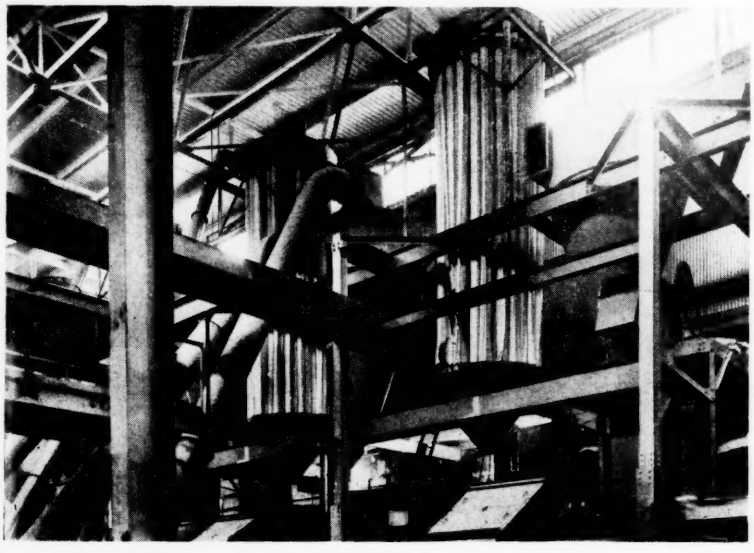
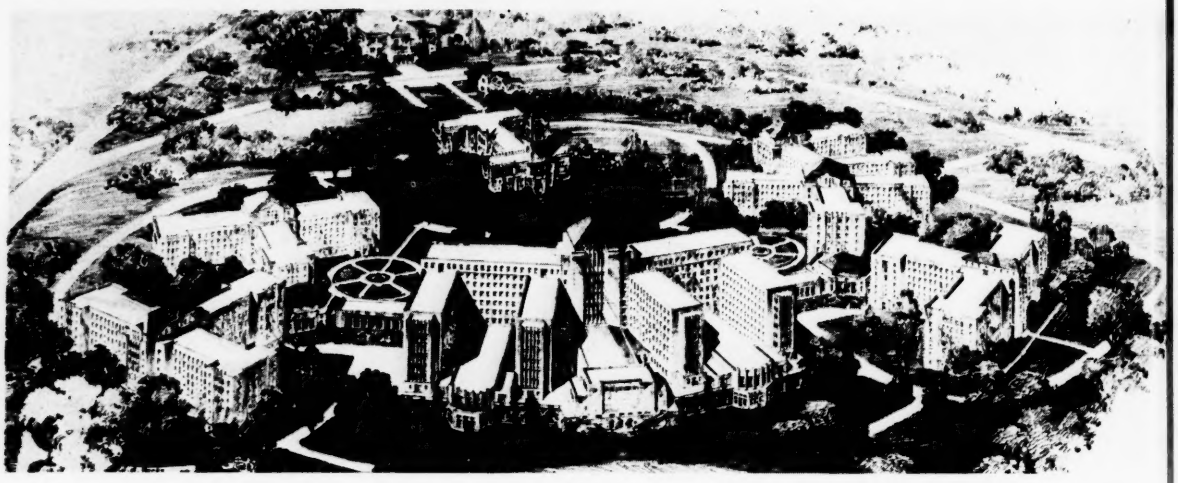


Left—top—South end of the mill building at the new plant. It houses the big crushers, hammer and Raymond mills and calcining kettles, which reduce the rock to flour-like powder. The overhead conveyor at the left reclaims the gypsum from the 60,000-ton storage pile, part of which is shown. The silos at the right are for the gypsum powder.

Left — Bottom — Precipitators and Cyclone collectors form an important part of the mill equipment.



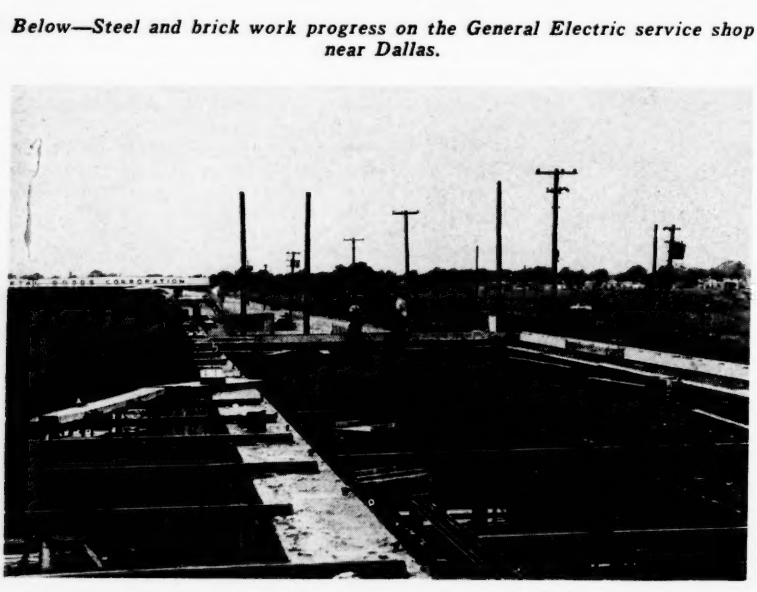
Above—Soldiers' Home, Washington, D. C., institution where a $10,000,000 expenditure is contemplated during the 1949 fiscal year. Porter and Lockie, architects and engineers of that city, are proceeding under direction of the Corps of Engineers on preparation of a master plan for rehabilitation and expansion. Work has been started on an air conditioning project and fire prevention measures.

South Experiences Big Year for Construction Value—Total Is Highhest In Peacetime

SOUTH'S CONSTRUCTION BY STATES

	December, 1947		Contracts Awarded Twelve Months 1947	Contracts Awarded Twelve Months 1946
	Contracts Awarded	Contracts to be Awarded		
Alabama	$ 2,259,000	$ 9,018,000	$ 54,608,000	$ 72,872,000
Arkansas	4,739,000	6,843,000	53,306,000	45,060,000
Dist. of Col.	7,477,000	890,000	45,367,000	19,496,000
Florida	38,214,000	18,409,000	227,468,000	205,235,000
Georgia	33,576,000	28,929,000	176,611,000	135,615,000
Kentucky	5,038,000	15,065,000	34,723,000	44,216,000
Louisiana	20,703,000	71,970,000	179,952,000	86,168,000
Maryland	26,228,000	16,659,000	169,043,000	144,460,000
Mississippi	4,694,000	14,633,000	66,451,000	64,260,000
Missouri	7,858,000	14,697,000	82,634,000	52,817,000
N. Carolina	14,439,000	12,188,000	85,541,000	74,953,000
Oklahoma	7,295,000	16,962,000	43,654,000	49,341,000
S. Carolina	12,977,000	9,988,000	61,736,000	128,627,000
Tennessee	8,304,000	23,592,000	54,255,000	101,385,000
Texas	53,308,000	279,666,000	551,657,000	488,777,000
Virginia	5,565,000	81,649,000	63,295,000	70,475,000
W. Virginia	4,934,000	48,141,000	34,353,000	13,775,000
TOTAL	$257,608,000	$669,299,000	$1,984,654,000	$1,797,532,000

Below—Steel and brick work progress on the General Electric service shop near Dallas.



PASSING all but two years in Southern construction history in value, contracts awarded during the twelve months of 1947 amounted to $1,984,654,000 to place the total above all previous figures for a similar period undisturbed by either war or its preparation.

The 1947 aggregate was ten per cent larger than its 1946 counterpart, which amounted to $1,797,532,000, and almost seventy-five per cent above the $1,134,416,000 valuation put on construction in the sixteen Southern states during 1945. Worth of construction in other years of the half decade finished in December was $834,532,000 for 1944 and $1,504,148,000 in 1943.

Annual totals exceeding that for the year just ended were recorded in 1941, when the $2,922,808,000 figure was swelled by preparation for an expected conflict, and in 1942, during which the country worked busily to build the industrial and military facilities necessary to participate in actual warfare, an effort which resulted in the $3,877,848,000 all-time peak.

Strength in all categories of southern construction, as tabulated from reports to the *Daily Construction Bulletin* of the MANUFACTURERS RECORD, marked the 1947 period. Private building occupied the premier position with a total of $495,990,000. Highways and bridges ranked next with a $432,784,000 total; industrial contracts third, with a total of $392,612,000. Totals for public building and heavy engineering work were $349,326,000 and $313,942,000, respectively.

The monthly average of $165,388,000 in-

dicates a year of substantial monthly totals. The peak month of the year was December with its $257,608,000 total; the low point, March with a total of $90,377,000. High and low points of the previous year occurred in April and January. The 1946 monthly average was $149,711,000, or ten per cent less than the comparable average for the months of 1947.

Private building predominated the southern construction picture during 1947, although it was followed fairly closely by highway and bridge construction values. Private building advanced from the second place occupied in 1946 to the first position in 1947 with a gain of twenty-three per cent. Highway's place in the southern construction picture was third in 1946, over which the 1947 total for such work was a twenty per cent advance.

Industrial construction dropped from first place in 1946 to third in 1947, the total being $392,612,000. Public building and heavy engineering construction switched positions. Public building was fifth in the preceding year, fourth in 1947, total $349,326,000. Engineering construction, next to last in 1946, was in the last 1947 position with a total of $313,942,000.

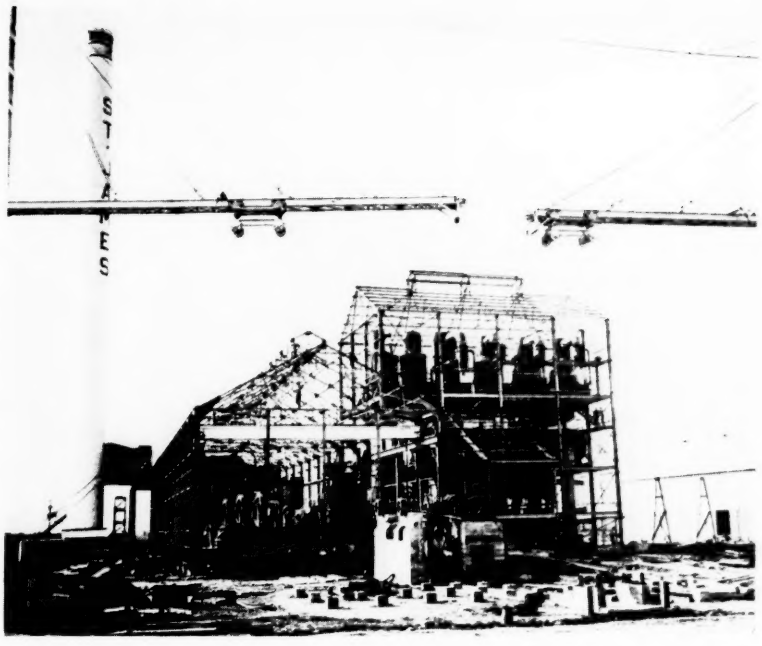
The $495,990,000 private building total was made up of seventy per cent, or $349,251,000 in residential construction, twelve per cent, or $63,967,000 in commercial construction with the remaining percentage divided between the $43,184,000 for assembly type buildings and the $39,588,000 for office buildings.

Private building was most active, according to reports, in Florida. The total for that resort state of the South was $121,529,000. Texas was a close second, the tabulation of values mentioned in reports to the *Daily Construction Bulletin* totaling $114,914,000. Closest competitor to those two states was Maryland, total $68,441,000. Georgia was fourth with a private building valuation of $41,374,000.

Highway construction in 1947 with its $432,784,000 total not only advanced substantially over its $359,882,000 counterpart of 1946 but was in the neighborhood of four times the value of such work in 1945, when the country's highway departments were just beginning to shake off the cloak of wartime restrictions.

Texas, whose expansive area requires large expenditures for highway purposes, again led the field. Total of Texas highway contracts as reported to the MANU-

(*Continued on page* 51)



Above—Fabricated steel totaling 450 tons from the Ingalls Iron Works went into the new St. James Sugar Mill, at St. James, La., on the Mississippi River west of New Orleans.

SOUTH'S CONSTRUCTION BY TYPES

	December, 1947 Contracts Awarded	December, 1947 Contracts to be Awarded	Contracts Awarded Twelve Months 1947	Contracts Awarded Twelve Months 1946
PRIVATE BUILDING				
Assembly (Churches, Theatres, Auditoriums, Fraternal)	$ 7,925,000	$ 11,594,000	$ 43,184,000	$ 24,011,000
Commercial (Stores, Restaurants, Filling Stations, Garages)	11,946,000	11,972,000	63,967,000	71,221,000
Residential (Apartments, Hotels, Dwellings)	39,073,000	17,739,000	349,251,000	291,140,000
Office	1,898,000	3,460,000	39,588,000	23,173,000
	$ 60,842,000	$ 44,765,000	$ 495,990,000	$ 409,545,000
INDUSTRIAL	$ 27,130,000	$373,348,000	$ 392,612,000	$ 497,755,000
PUBLIC BUILDING				
City, County, State, Federal and Hospitals	$ 24,358,000	$ 41,651,000	$ 146,798,000	$ 145,764,000
Housing	.....	.....	470,000	9,007,000
Schools	28,343,000	46,446,000	202,058,000	97,198,000
	$ 52,701,090	$ 88,097,000	$ 349,326,000	$ 251,969,000
ENGINEERING				
Dams, Drainage, Earthwork, Airports	$ 37,752,000	$ 60,867,000	$ 198,944,000	$ 191,532,000
Federal, County, Municipal Electric	2,415,000	11,680,000	19,281,000	26,629,000
Sewers and Waterworks	18,874,000	30,071,000	95,717,000	60,220,000
	$ 59,041,000	$102,618,000	$ 313,942,000	$ 278,381,000
ROADS, STREETS & BRIDGES	$ 57,894,000	$ 60,471,000	$ 432,784,000	$ 359,882,000
TOTAL	$257,608,000	$869,299,000	$1,984,654,000	$1,797,532,000

Below—Architect's perspective of the $1,500,000 freight terminal to be erected next year in the Trinity industrial district, Dallas. To be located on a 40-acre site, the building will replace an older terminal erected 56 years ago by Jay Gould, the renowned financier who headed the Texas and Pacific Railway at the time. The building will be two stories high and constructed of steel, stone and concrete. A new motor transport garage will be erected nearby.

Above—Manufacture and distribution of hundreds of products mark industrial development in the Southwest. This plant is that of the General Tire and Rubber Co., Waco, Texas.

Katy Development Department Pushes Industry Expansion

INDUSTRIAL development, within the last decade, has come into its own in the Southwest. And like the robust territory which it serves—the fastest growing industrial territory in the nation today—it has reached a peak of efficiency which, to most observers, surpasses that attained by its more staid predecessor in the older industrial areas of the nation.

Decentralization of industry has in a great measure been responsible for this maturity of southwestern industrial development. Movement of industry from the East and North to the West and South was given tremendous impetus with the beginning of World War II. To the surprise of many experts, decentralization did not stop with the end of hostilities, but if anything, gained momentum.

Despite the so-called post war period of unrest, industry as a whole continued to move and expand. Live industrial organizations and live civic organizations, wanting additional industries in their communities, began to reach out and display their industry-inducing wares.

A Specialized Field

Hence southwestern industrial research and development departments, in the highly efficient and specialized forms they have assumed today, are a natural outgrowth of industrial decentralization.

The activity of the industrial department of the Missouri-Kansas-Texas Railroad is an excellent example of the way a corporation (or a civic organization, if correctly established) can assist in location of either newly organized firms or branches of old-line companies.

With terminals in St. Louis and Kansas City on the North and San Antonio and Galveston on the South, the Katy serves such other important fast-growing centers of industry as Oklahoma City, Tulsa, Dallas, Fort Worth and Houston. Spaced between are a hundred smaller, but no less industrially attractive, towns and cities—each eager to bring new blood and new industry within its boundaries.

With the transplanting of industry southwestward, officers of the Katy Railroad realized that its lines serve a natural corridor down which the industrial migration was moving. Katy management, confident in continued prosperity throughout the territory which the road traverses, enlarged its Industrial Research and Development Department and charged it with bringing a fair share of expanding industry to Katy tracks.

Headed by Veteran

H. Gifford Till, veteran advertising and industrial man, thoroughly familiar both with the railroad and the Southwest, was placed at the head of the department. Under his guidance, a well-knit, efficient organization has been set up which might well serve as a model for the profession.

"Industrial Development," says Mr. Till, "is definitely not a business of wining and dining an individual and then, through the smoke of a good cigar, asking him to locate his business in a certain area. Industrial representatives want cold facts and hard figures, and those are the things we give them."

What he explains in a simple statement is not nearly so simple in practice. Vast files of statistics are maintained in the Development Department's offices. These statistics cover every city and county, and nearly every village and farm, along the Katy's more than 3,000 miles of main track.

Mr. Till operates the department upon the basic theory that although statistics and files are necessary, actual groundwork on each case must be carried out by a personal representative—in the area under consideration.

The field staff, therefore, although not large, is adequate. Each man, especially trained and long experienced in the type of work expected from him, is assigned a certain area of Katy-served territory. Any inquiries from proposed moves of industry into his territory are served by the Katy representative personally.

Each man knows his territory as he knows his own front yard. He knows the business, industrial and civic leaders. He is on familiar terms with the county agent and the president of the chamber of commerce. He knows farmers by their first names as well as the chairmen of the boards of local industries. In addition he knows the Katy's own local representatives and agents. In this personal manner only, Till believes, can the railroad best serve not only its trade territory, but those interested parties who would locate in the territory.

Decentralization Defined

Decentralization of industry can be, in itself, divided into two main classifications—distribution and manufacture. The distribution phase of decentralization was the forerunning stage, leading naturally into the more complicated stage of actual manufacture.

Eastern manufacturers realized that a saving could be obtained by shipping to a central point of distribution, and from there breaking down larger shipments and spreading their products out to smaller consumer points. Although the actual freight cost on a single set of tools in Fort Worth, for instance, is probably the smallest cost item computed in the retail price, a quantity of five thousand sets adds up to a sizable total. Shipping in quantity to a central point, a manu-

Above—Wyatt Food Stores, Inc., erects a building in the Katy Weichsel industrial development near Dallas. Just a few years ago the area was a pasture. Today there are more than 30 industries there.

facturer realizes an obvious saving through cut in clerical help, carload-lot freight prices, etc.

This initial type of relocation was as much a wise merchandising move, probably, as it was an actual decentralization of industry. However, it led so naturally into the next step—manufacturing of products near either the source of raw materials or the market area to be reached—that it must necessarily be considered as a part of the decentralization movement, Mr. Till points out.

The movement of industry to central distribution points naturally called for, in most instances, location of warehouses or installations of like nature in the larger centers of population. Our Eastern tool manufacturer, as an example, would defeat his own purpose if, in an attempt to meet the East Texas market demand, he would place his distribution point in a small North Texas city and endeavor to supply such centers as Dallas or Fort Worth from there. Obviously, with his center in Dallas or Fort Worth, most of his distribution headaches concerning the densely populated areas vanish, and the East Texas market still remains within easy access to his establishment.

Mr. Till's office, in its effort to help industrial development of this nature, must necessarily have available the answers to myriad questions, and know, on an instant's notice, where to get the answers if they are not on file. They must know density of population in given areas: per capita retail sales; switching facilities, with probable connections to the East or North; suitable buildings or building space—and answers to a hundred other questions which prospective merchants or manufacturers might ask in looking over a new territory.

True, answers to all of these questions are available through other sources, and many times the manufacturers avail themselves of them. However, business men have come to learn that from a modern industrial development department they can get a "package" of information which if assembled by their own staffs would take much time and money, and in most instances, would be less complete.

Although the information may be in Mr. Till's office, or gathered by his staff, it does not necessarily follow that each inquiry can be answered with the same set of figures or the same general outline. The tool manufacturer wishing to establish a distributing point for the Southwest, for instance, could not use the information made available for a manufacturer of prefabricated grain bins. The first would need to know of Dallas or a like vicinity, while the second would, in all probability, establish his distribution point at Wichita Falls or in the Oklahoma Panhandle.

Firms that found it advantageous to establish distribution facilities in the Southwest have found and are finding it just as advantageous to locate branch manufacturing facilities within the area. The manufacturing facilities follow distribution facilities naturally.

Here the basic law of supply and demand is asserting itself. As the area changed, so did the markets, which, in turn, changed the needs. New and expanding markets called for new manufacturing and new distribution.

New manufacturing projects, as well as branch factories, eye the Southwest with favor. It is at this point that or-

(Continued on page 58)

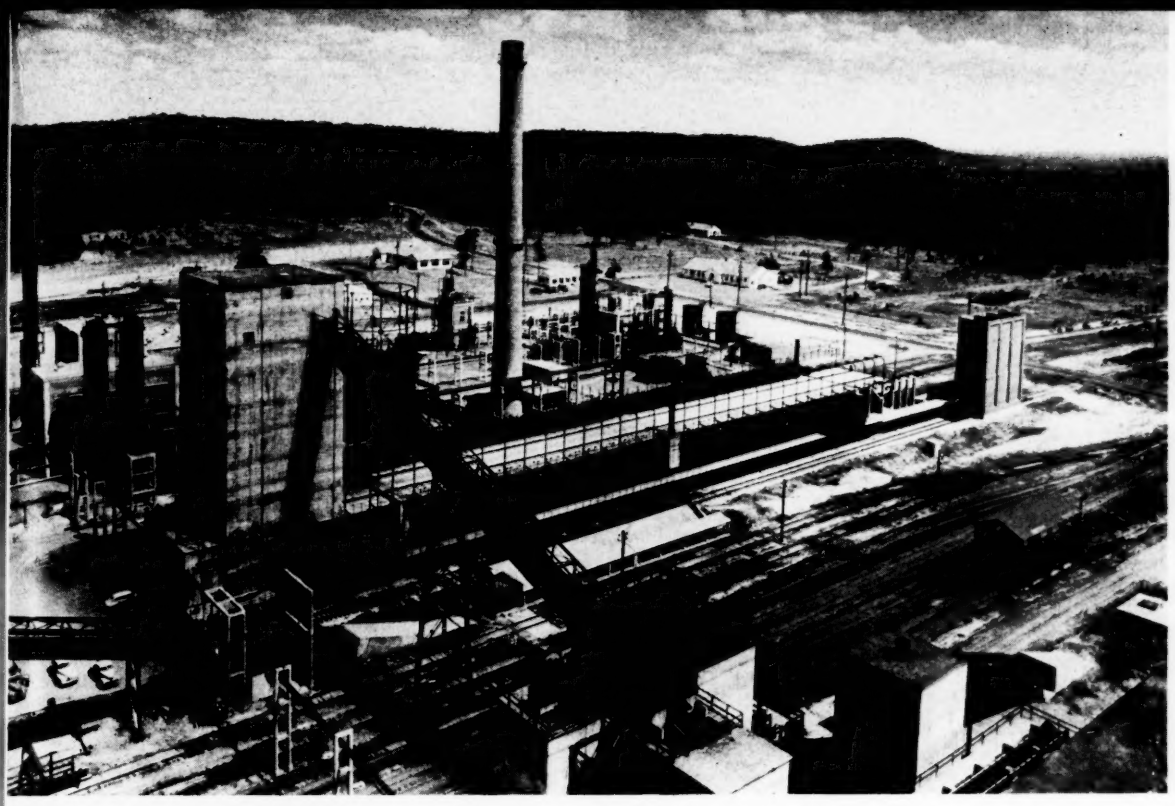
Below—The Titche-Goettinger building nears production stage.

Above—Capacity of Goodyear's recently completed $4,000,000 tube manufacturing plant at Gadsden is 30,000 tubes daily. Completion of the plant climaxed an expansion program that has more than tripled the company's operations at that Alabama town, where the original plant was erected in 1929 as the South's first tire factory. With a million dollar monthly payroll and nearly 4,000 employes, the Gadsden factory is the largest of Goodyear's eleven subsidiaries and second only to the main plant at Akron, Ohio.

Southern Industry Expands

Left—The 96-acre plant of Southeastern Ship Yards at Savannah, Ga., bought recently by the Port Authority there. The 15 buildings with their 200,000 square feet of space will be leased to new industries.

Below—Workmen install machinery in the manufacturing building of the new International Harvester plant at Memphis, Tenn. Covering 540,000 square feet, the building will house assembly lines for Harvester's mechanical cotton picker and one-man pickup hay baler.



Above—Coke ovens at the Daingerfield, Texas, plant of Lone Star Steel Co. The battery consists of two sections of 39 ovens each and with an ore beneficiation plant and the furnace shown on the cover comprise part of the Lone Star operation which recently starting producing. The dearth of good grades of coke was one of the reasons blast furnace output was reduced last year.

High 1947 Steel Output Expected to Continue

EXPECTED high production in the Nation's steel mills in 1948 will bring the output nearer to demand, according to the American Iron and Steel Institute, which reveals that the 84,000,000 tons made last year was the largest for a peacetime year and predicts that this year's figure will equal or exceed that peak.

New facilities being constructed under a one billion dollar expansion program by most of the country's steel producers will

(*Continued on page 60*)

Harvester Finishing Memphis Plant for Making New Cotton Picker

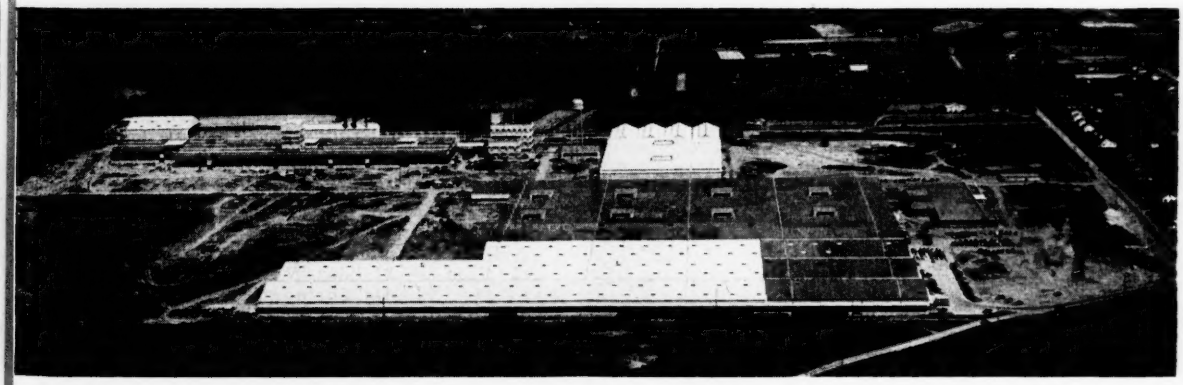
THE Memphis, Tenn., plant of International Harvester Co.—the company's second in the South and newest addition to 26 plants—is producing the new two-row cultivators as the first of a line of farm cultivation implements which includes the new Harvester mechanical cotton picker, two types of one-man pick-up hay balers and a number of tillage tools for the South.

Three hundred miles south of the first Dixie plant of International Harvester, at Louisville, where the Farmall Cub tractor is made, the Memphis works is located on a 260-acre plot high above flood water stage atop the Chickasaw Bluffs, just outside the north limits of the Tennessee city. Low bottomlands on the back half of the property make ideal testing grounds.

Into the 1,400,000 square feet of floor space in the Memphis Works has gone planning which had the advantages of more than a century of experience in farm equipment manufacture. More than 60 per cent of the plant's 500 machine tools have been installed and a considerable portion are in operation turning out the tillage tools. The power house, foundry, metallurgical and administration buildings are in final stages of construc-

(*Continued on page 54*)

Below—Memphis Works where International Harvester is producing farm machinery, including the new mechanical cotton picker.



LABOR RELATIONS

INDUSTRIAL EMPLOYEE TRAINING—II

by
Edward Arter
Curtiss-Wright Corporation

ON my way to work each day I drive past a huge iron tank in front of an industrial plant. The tank must be a point of some pride to the company because it is kept painted with a gleaming coat of white paint. One morning this beautiful tank was sadly caved in. Investigation showed that a man had been told to drain a certain amount of the contents of the tank. Although having been with the company for sometime he had never before done this particular job and failed to provide an air vent to allow for equalizing of pressures. A very simple physical principle, one which we might assume any high school boy would know. Industry, however, cannot afford to make such assumptions.

The man employed by a power company is another example who by the wrong combination of switches, burned out a huge generator, threw half a city into darkness, and was himself badly burned. He assumed that, of course, he would be fired. Upon his release from the hospital, however, he was placed back on the same job where the accident had occurred. The reason for this action was that the company now knew that the worker knew the safety hazard of that job. Fortunately, there are more inexpensive methods of determining this. Most plants keep an accurate record of materials in their inventory. They know the number, capacity and condition of the various machines. They are comprised hourly of the schedule of production. Why is it not then equally important that management have an analysis of the basis skills and knowledges required in their industry, with information indicating which of their employees are adequately trained, which need further training, and the types of training needed.

What is Meant by Training

Going back to fundamentals we can find common ground for all jobs from clerk, janitor or typist through middle management to the general manager or president, and that is each must "know" specific things about his job and be able to "do" the skills involved.

Every job can be analyzed in terms of the "know" and "do" elements.

For example, let us consider a simple job which will both illustrate the "know" and "do" phrases and will also give some concept of the extent of the learning necessary in a modern industry. I will use an example from the aircraft industry.

Visualize, if you will, the process in manufacturing this angle or bracket consisting of a flat piece of metal bent about a radius at an acute angle. A worker well trained in doing even this simple job must "know" certain things and be able to "do" certain things. These are:

"KNOW"
(Knowledge of Job)

1 He must *know* something about different types of metals and how they will react.

2. He must *know* where to get materials and information.
3. He must *know* what machines and equipment are to be used.
4. He must *know* and understand the paper work, work orders, work procedures, etc.
5. He must *know* policies and practices, rules, and objectives of the company.

"DO"
(Skills of Job)

1. He must be *able* to read simple blueprints or templates.
2. He must be *able* to operate a power brake, which includes setting the dies, starting and stopping the machine, adjusting the ram, setting the stops or guides, tripping the ram, and safety factors involved.
3. He must be *able* to use certain hand tools to check the work such as micrometers, scale, protractor, radius gauge, etc.

Since this amount of information is necessary in building a competently trained employee on this one simple job, consider the complexities involved in your highly technical jobs.

How then, does an employee learn these things? Unfortunately, to date, there has been no training machine developed whereby through the control of amperage and frequencies we can inject the proper knowledge and skills into an employee by placing him in this machine for a period of time. Until such a machine is developed, we must use the only method we have, which is a simple learning process of absorbing one point at a time in a logical sequence with provisions for repetition and practice until the individual has mastered the knowledge or skills that are required.

To illustrate this learning process, let us utilize another demonstration job.

(This demonstration consists of maneuvering five discs, two large and three small, from a starting arrangement of alternating large and small to a final arrangement of the two large together and the three small together. This must be done according to certain stipulated requirements regarding the number of moves, method of moving, etc. An individual is selected from the audience, shown how to do the job with sketchy instructions and left on his own. His inability to accomplish the task proves the need for further instruction. The second time, organized instruction is given according to a set pattern and the individual's immediate success with the task illustrates the value of this type of instruction.)

Learning is an organization of ideas. These ideas must follow a logical sequence if the learner is to understand. Since it is to industry's advantage to have the worker learn as quickly as possible, is it not wiser to organize the items which he will be expected to learn and present them to him in a logical sequence? Under the latter condition the learner's interpretations may or may not be in compliance with those intended by the company.

Organizing Training Program

The volume of material and the time element will not permit a complete study of this topic. We will be able only to develop some idea of the scope which industrial training can embrace and to review the basic steps which must be applied in establishing organized training.

This can best be shown through a series of charts set up under the following headings beginning with the major consideration of selecting the areas in which to train, through the progressive steps of organizing training to the details of making such training effective.

Scope of Training Activities

1. Scope of Training Activities.
   a. Developing a Training Program.
      1. Training and Educational Methods.
         a. Training and Educational Devices.

The chart below lists nine areas of training activities. It has been found that within each of these areas a fairly standard pattern of analysis, preparation and administration can be established.

While it is not supposed that any company will establish all of these types at one time, still in setting up one or two, they should be aware of the existence of the ohers.

1. *Management Training* (Includes training of all supervision, department heads and executives.)

2. *Direct Production* (Manufacturing departments, ie., press, assembly, etc.)

3. *Indirect Production* (Service Departments, ie., quality, parts control, etc.)

4. *Apprentice Training* (For trade skills.)

5. *Sales and Customer Service Training.*

6. *Safety Training* (For both supervision and employees.)

7. *Induction or Pre-Employment Training.*

8. *Supplementary Training* (Outside working hours for employees self-improvement.)

9. *Special Training* (To meet unusual conditions, ie., new products, new equipment, new policies or procedures.)

After deciding from production records, efficiency records, industrial relations problems, etc., in which area to establish training, the next task is to develop a training program. In general, the ten steps shown in the following chart will be applied in developing a training program in

(*Continued on page* 46)

Southerners at Work

C. Munt

Munt Made Executive of Georgia Commerce Body

Christian Munt, formerly assistant executive manager of the Richmond, Va. Chamber of Commerce, has assumed his duties as executive vice-president of the Georgia State Chamber of Commerce and has opened headquarters at 205-7 Forsyth Building, Atlanta, Ga.

A native of Petersburg, Va., Mr. Munt is a graduate of Hampden-Sydney College where he was a member of Omicron Delta Kappa, honorary fraternity and Chi Phi, social fraternity. He became associated with the Richmond Chamber in 1930 leaving only for three years' service as an officer in the Army of the United States in World War II.

"We feel that Mr. Munt is exceptionally well qualified in his background and experience to direct the activities of the Georgia State Chamber of Commerce and are glad that the preliminaries are out of the way and we can move forward with our overall program for Georgia," said Walter L. Grefe, Griffin, Ga. businessman who is president of the state chamber.

L. F. McCollum Elected President of Continental Oil

Continental Oil Co. at a board of directors meeting held in New York elected Leonard F. McCollum, former coordinator of producing activities of the Standard Oil Co. of New Jersey, president of Continental Oil effective December 1, to succeed Dan J. Moran who is relinquishing the duties of his office due to ill health. Mr. Moran will continue to serve the company in a consulting capacity.

Mr. McCollum was born in 1902 in Bradford, Tenn., and received his early education in the public schools of Fordtran and Cuero, Tex. He received his geological degree from the University of Texas in 1925 and then joined Humble Oil and Refining Co. as geologist at Amarillo and San Antonio. In 1934 he went with the Carter Oil Co. as chief geologist, and rose to the presidency of that concern. He was named assistant coordinator at Standard Oil in 1943, and a year later was made coordinator of the world-wide operations of that company.

Mr. Moran was born in Cygnet, Ohio, in 1888, and has been connected with the oil industry since 1905. He received his B.S. degree from the University of Dayton in 1907, and did graduate work at the Case School of Applied Science before going with the Texas Co. He eventually became a vice president, director and member of the executive committee of that firm. In 1928 he became president of the Marland Oil Co. and under his direction it was completely reorganized and had its name changed to the Continental Oil Co. in 1929. With Continental Mr. Moran has built up an enviable record in the industry.

Wagner Official Honored by NEMA

A. H. Timmerman, vice president of Wagner Electric Corp., has received a certificate for "fifty years of continuous service in the electrical industry" from the National Electrical Manufacturers Association.

Mr. Timmerman, with a Master's degree in Electrical Engineering from Cornell, came to St. Louis in 1893 as an instructor of physics at Washington University. The next year he became professor of physics and electrical engineering at Missouri School of Mines and Metallurgy.

Southern States Roofing Elects New Directors

Thomas Oxnard, president of the Savannah Sugar Refining Corp., and John Morel, Strachan Shipping Co., partner, have been elected directors of Southern States Iron Roofing Co., of Savannah, Ga.

Southern States Board of Directors also seated two new directors: Livingston B. Keplinger, of New York, president of the Steel Shipping Container Institute, and James P. Houlihan, Jr., member of the Savannah law firm of Anderson, Connerat, Dunn & Hunter.

Southern Alkali Names Weeks

Appointment of Charles E. Weeks as assistant to the operating vice president of Southern Alkali Corp., Corpus Christi, Tex., has been announced by O. N. Stevens, operating vice president for the firm.

A native of Runge, Tex., Mr. Weeks has been associated with Southern Alkali since the firm was established here in 1934. Prior to this appointment, Mr. Weeks had served as auditor for the alkali producing firm. His headquarters will be at the Southern Alkali plant, Corpus Christi.

Shell Announces Changes

H. Bloemgarten, vice president of exploration and production of Shell Oil Co., Inc., Houston, Tex., has been appointed managing director in charge of the technical operations of the Royal Dutch Shell Companies, effective January 1, 1948, it was announced today. His headquarters will be at the Hague.

Mr. Bloemgarten has been with the Shell organization over 25 years. In 1935 he was appointed vice president in charge of production in St. Louis, and since 1942 he has made his headquarters in New York.

A. J. Galloway, regional vice president of Shell in Houston, has been appointed vice president in charge of exploration and production, replacing Mr. Bloemgarten.

E. D. Cumming will succeed Mr. Galloway in Houston, Mr. Burns said. Mr. Cumming graduated in engineering from Auburn University, Ala., and was first employed by Shell at Long Beach, Calif.

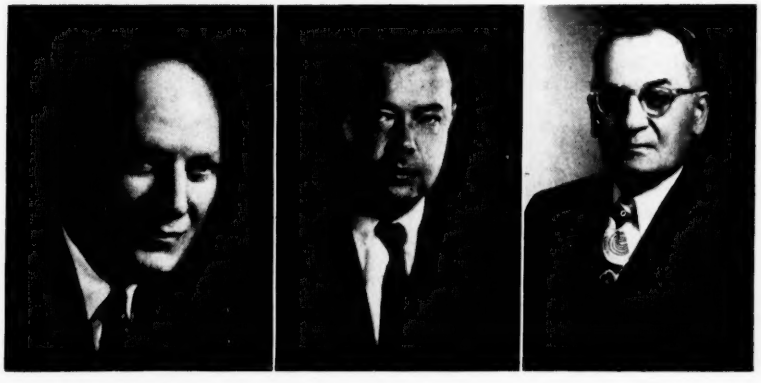
Glidden Appoints Dr. W. D. Stallcup

Dr. W. David Stallcup has been named manager of the naval stores division of the Glidden Co., at Jacksonville, Fla., Paul E. Sprague, vice president and assistant to the president, announced recently.

Dr. Stallcup succeeds E. W. Colledge, who has relinquished his Glidden duties

(*Continued on page* 38)

J. Morel *T. Oxnard* *A. Timmerman*



Southerners at Work

Dr. Stallcup Appointed

(*Continued from page 37*)

to devote full time to the business of E. W. Colledge, G.S.A., Inc., Jacksonville, of which he is president and which will continue in the capacity of sales agent for the products of the Glidden naval stores division.

Formerly assistant general manager of the division, Dr. Stallcup is a graduate of the University of Florida in chemistry, where he also gained his doctorate in the same subject. He joined Glidden's naval stores division as a research chemist in 1943 and was named assistant general manager of the division in 1946. Under the general supervision of Mr. Sprague, he will direct operations of Glidden's naval stores plants at Jacksonville and at Valdosta, Ga.

Mr. Sprague expressed the Glidden Company's high regard for Mr. Colledge, who has served the company with outstanding success since early in the twenties.

Institute of Textile Technology Appoints V. B. Shelburne, Jr.

Victor B. Shelburne, Jr., a native of Washington, N. C., has joined the staff of the Institute of Textile Technology where he will work in the division of chemical engineering. Mr. Shelburne is a graduate of North Carolina State College, holding the degree of Bachelor of Chemical Engineering.

For two years, during the early part of the war, he was with the Chemical Warfare Service at the Huntsville Arsenal. Just prior to coming to the Institute, Mr. Shelburne was with Spencer Kellog & Son as supervisor-chemist of their Buffalo refinery.

Powell Re-Named Textile Division Head

J. S. Powell of Lexington was re-elected chairman of the northern North Carolina-Virginia division of the Southern Textile Association at its annual fall meeting at Greensboro.

Walter Vincent of Danville was named vice-chairman; Howard Barton of Spray, re-elected secretary, and executive committeemen named were N. A. Carpenter of Cooleemee, Ray Butler of Spray, and Sherman Basinger of White Oak.

Dr. Soday to Head Lion Oil Research

T. M. Martin, president of Lion Oil Co., Eldorado, Ark., has announced the appointment of Dr. Frank J. Soday as director of research. In that capacity Dr. Soday will conduct an expanded and intensified research program in all departments of the petro-chemical field.

In responsible research positions Dr. Soday has for the past fifteen years specialized in the field of hydrocarbon utilization and his duties with Lion Oil Co. will represent a continuation of that work.

Florida Academy of Sciences Holds Meeting

Robert B. Campbell, consulting geologist of Gulf Hammock, Fla., read two papers before the annual meeting of the Florida Academy of Sciences at Tallahassee recently. They were titled: "Seismology in Florida" and "The Changing Picture in World Petroleum." Mr. Campbell is past president of the Academy and is a vice president of the Southern Association of Science and Industry.

Cason Callaway, Jr., Joins Callaway Mills

R. D. Williams, Jr., president of Callaway Mills, Inc., LaGrange, Ga., announces the appointment of Cason J. Callaway, Jr. as salesman in the industrial fabrics division of the New York office of Callaway Mills, Inc.

Mr. Callaway represents the third generation of the Callaway family to be actively associated with the Callaway Mills organization.

E. W. Noxon New President of Dixie Manufacturing Co.

Elmer W. Noxon, formerly vice president of the Dixie Machinery Manufacturing Co., St. Louis, Mo., assumed the presidency of that company following his purchase of all of the outstanding stock of the organization.

With a background of 18 years' association with Dixie, Mr. Noxon also served in the capacity of manager and chief engineer of the Ralston-Purina Co.

H. H. Stock, for 21 years with Dixie was reelected to the position of secretary and J. L. Leykam, with the company for 6 years, was elected treasurer.

The Dixie concern manufactures crushing, grinding and pulverizing equipment for the rock and feed industries.

Norton Now Treasurer of Gaffney Mfg. Co.

Two important personnel announcements were announced recently at Spartanberg, S. C.

At Gaffney Manufacturing Co., J. J. Norton, Jr., was promoted to treasurer from assistant treasurer, succeeding W. A. L. Sibley, who resigned to give his full time to other textile interests, including general superintendency of Monarch and Ottaray Mills.

T. M. McNeil resigned from the Monarch and Ottaray plant management after 30 years and will retire from the textile field.

R. H. Graham, Jr., Joins Mealpack In the Carolinas

Mealpack Corp. of America, 152 W. 152nd St., New York, announced the recent appointment of Reuben H. Graham, Jr., as regional representative for the southern part of North Carolina, and the state of South Carolina, in charge of all sales and service in these areas. His temporary address is 420 N. Church St., Charlotte, N. C.

Mr. Graham is a graduate of Duke University, class of '38. He brings to users of Mealpack containers, service carts, and related kitchen and commissary equipment for hospital, institutional and numerous commercial applications a broad background in the serving and preparation of cooked foods.

He has been a native of Charlotte the last 28 years, and resides there with his wife and daughter.

Georgia Hardwood Official Leaves on Six-Month Survey of World Business Conditions

J. C. Wickliffe, vice president in charge of exports of the Georgia Hardwood Lumber Co., of Augusta, Ga., has left on a six months' world survey of business and economic conditions in most of the fifty-one foreign countries where the company has offices and affiliates.

Mr. Wickliffe sailed from New York aboard the SS America for Southampton, England, first stop on his twenty-five thousand mile journey by ship, plane and train which will include most of the countries of Europe, Asia and Africa.

Hewitt-Robins, Inc., Names Distributor for Kentucky Territory

Appointment of the Industrial Equipment Co., of Louisville, Ky., as a distributor of the entire Hewitt Rubber Division's line of industrial hose, belting and packing, was announced recently by J. H. Hayden, vice president in charge of sales, Hewitt-Robins, Inc., Buffalo 5, N. Y.

Recognized as one of the leading supply houses in the Kentucky territory, the Industrial Equipment Co. will serve all industries with the Hewitt line within a 45-mile radius of Louisville.

William A. Mivelaz is owner of the Industrial Equipment Co. He is a native of Louisville, and for eight years worked for a mill supply concern as a salesman before starting his own company in 1933.

TWA-Delta Plane Change Cut at Cincinnati

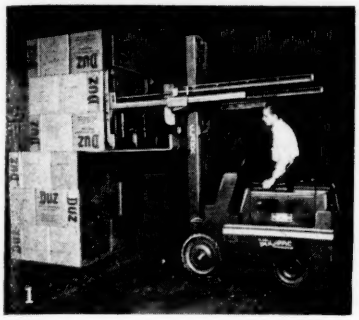
The Civil Aeronautics Board has approved an equipment interchange agreement between Trans-continental & Western Air, Inc., and Delta Air Lines, Inc., under sections 412 and 408 of the Civil Aeronautics Act. The agreement will permit the transportation of persons, property and mail between points on TWA and Delta routes without the necessity of changing planes at Cincinnati, Ohio.

Since May 1941, Delta and TWA have maintained connecting services at Cincinnati for travel between the Great Lakes area and points in the South and Southeast served by Delta. The proposed interchange operation would provide a single plane service between Detroit, Toledo and Dayton on the one hand and Atlanta, Miami, and other points on Delta's routes in the South and Southeast on the other.

New Products

Fork Truck Development

Clark Equipment Co., Tructractor Division, Battle Creek, Mich. announces production of the Pul-Pac, their attachment for Clark fork trucks. The Pul-Pac handles a unit load assembled on a base sheet of corrugated paper, fibre-board or similar material either disposable or durable in nature. A hydraulically-actuated vertical sliding rack travels horizontally above the truck's wide load plates, and a clamping device at the bottom of the rack grips the projecting edge of the carrier sheet while the load is pulled onto the load-plate. At destination, the rack is moved forward, pushing the load off of the load-plate into the desired position. Lifting, tilting and lowering are done in the usual manner.



Clark Fork Truck Attachment

Portable Hand Drill and Drill Press Attachments

J. D. Whittle Co., 208 N. Wells St., Chicago 6, Ill., announces four additional interchangeable attachments for hand drills and drill presses which will enable the user to sand, drive screws, polish, grind and file in addition to sawing wood, steel, plastic and other similar materials, all with the same power unit.

These attachments are light in weight and are easily carried from job to job according to the manufacturer. No special skill is required to operate them once they are attached. There are no gears or crankshafts to wear out or to be replaced. All working parts are case hardened to assure long wear under vigorous usage.

These are the attachments: (a) Saw and file attachment for hand drill only. This device converts the regular spinning motion of the electric hand drill into a speedy forward-backward motion for sawing or filing; (b) three-inch disc sander for any electric hand drill or drill press, used for all sanding, grinding or polishing jobs particularly where larger tools cannot reach the work; (c) saw and file attachment for professional and home craftsman use, to be inserted into any electric hand drill, and most types of drill presses; (d) screwdriver attachment for any electric hand drill or most drill presses, having a screw finder to keep screwdriver on screw head. It will accommodate socket bits, and Phillips screw driver bits.

Portable Belt Conveyor Booster

Island Equipment Corp., 101 Park Ave., New York 17, N. Y., recently introduced its portable belt conveyor booster, known as the "Styl-O-Veyor". This conveying unit is capable of being fed or discharged from either end, and its angle or height is quickly adjustable by hydraulic power.

Width of the unit inset is sixteen and one-half and twenty-six and one-half inches. The belt is a three-ply rubber Ruff Top belt, twenty feet in length. The vertical adjusment at center is twenty-four inches. Minimum feed elevation is twelve inches, and the maximum is thirty-six inches. The maximum discharge elevation is ten feet six inches at twenty-eight degrees.

The conveyor is driven by a three-quarter HP electric motor, and the belt speed is sixty feet per minute. It operates on four six-inch swivel ball-bearing casters, has two floor locks, and is operated by a push-button on and off switch.

"Tank Type" Cleaner

Ideal Industries, Inc., 1423 Park Ave., Sycamore, Ill., announces its all-purpose, industrial "Tank Type" Cleaner for general vacuum cleaning, dust collecting and water pick-up.

The Ideal does not have an external bag to get in the way, instead it has a filtering system which is entirely self-contained. Incoming air is whirled around inside the tank and heavy particles are deposited there. The air then passes through a cloth bag filter where the dust is removed. Collected dirt is easily emptied from the cleaner by simply raising the vacuum sealed lid and then lifting out the 9-gallon tank and dust bag.

The Ideal cleaner moves easily over rough or smooth surfaces on its four large 5-inch diameter wheels. It has a low center of gravity with the motor unit mounted in the bottom, making it very difficult to upset. Swivel wheels in front permit the unit to follow the hose with ease. Small width clearance permits the cleaner to move down narrow aisles, between desks and machinery.

A 1-1/3 H.P. continuous duty motor provides ample power without overheating. Construction is of 16-gauge steel with smooth Hammerloid finish. A 30-foot primary cord provides 2700 square feet of coverage from a single outlet.

Flexible Shaft Machine

N. A. Strand and Co., 5001 N. Wolcott Ave., Chicago 40, Ill., recently presented its Rotoflex 4-speed gear drive flexible shaft machine. This piece of equipment, which comes in three types: bench, floor and vertical, has been fully tested during seven years of practical application in all types of metal fabrication plants, and has been found to be mechanically sound, according to the manufacturer.

In operation it employs a patented type of quick change gear drive, utilizing four positive speeds by easy method of instantly changing from one speed to another. Standard rotoflex machines have speeds of 850, 1800, 3600 and 4500 r.p.m., while the high-speed machines, using a 3450 r.p.m. electric motor, have speeds of 1700, 3600, 7200 and 9000 r.p.m.

The manufacturer claims that grinding, buffing, polishing, sanding, drilling, reaming, filing, etc., can be done faster, easier and at less cost with this machine.

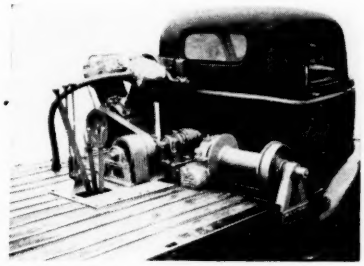
Compressor-Winch Assembly

Davey Compressor Co., Kent, Ohio, recently announced the development of a new truck-mounted "Auto-Air" compressor-winch assembly.

Power for operation of both compressor and winch is transmitted from the truck engine by a Davey heavy duty power take-off installed in the truck's driveshaft. Countershaft with two individual twin disc clutches provides for either simultaneous or separate operation of compressor and winch. The compressor is a standard Davey model 105-VC "Auto-Air." It delivers 105 c.f.m. at 100 lbs. pressure. Winch is of 25,000 lb. capacity.

Air receiver and double hose reels are mounted beneath the truck platform, thus effecting substantial space savings. The unit extends only 40 inches behind the truck cab, leaving ample space for the transportation of men, tools and materials, and is 38 inches high.

The assembly is recommended by the company especially for pipe line, public utility, railway, mining and airport maintenance use as well as for general construction applications.



Davey Compressor-Winch

Safety-Relief Valve Announced

Farris Engineering Corp., 537 Commercial Ave., Palisades Park, N. J., manufacturers of safety and relief valves, has announced a safety-relief valve, type No. 2680, designed for handling inlet pressures up to 2000 pounds, and temperatures up to 900 degrees Fahrenheit, and for handling corrosive liquids, vapors, or gases. This valve is made of cast steel with stainless steel trim, and its construction permits proper nozzle flow, restriction of the flow of vapors into the spring chamber, and the prevention of leakage and seeping. The valve is available in sizes from 1½ inch by 2 inches to 6 inches by eight inches, and its parts are completely interchangeable.

Master Puller Set

Plomb Tool Co., Los Angeles 54, Calif., has placed on the market a master puller set, designated No. 4000 AA. This set is designed to save time and money according to the manufacturer. It consists of only 42 items, but due to the interchangeability of Plomb's puller parts, it provides the equipment needed for numerous puller jobs.

With the parts furnished it is possible to assemble any Plomb slide hammer, light, medium, or heavy duty puller. In addition the set includes a wheel puller, a blind bearing puller, and a cap screw crossarm.

Because of the many set-ups that can be made for various jobs, the set is said to be very useful in repair shops and industrial plants.

IBM Card Stencil Typewriter

International Business Machines Corp., 590 Madison Ave., New York 22, N. Y., announces an electric card stencil typewriter as the latest addition to its line of electric typewriters. The machine has a special carriage for holding and feeding card stencils and is also provided with a frame for holding a backing strip or roll to protect the platen from defacement, as well as a separate record strip roll holder which may be utilized to keep a carbon record of the stencils cut. A carbon-faced backing roll may be used to facilitate the reading of the completed stencils.

The twelve-inch machine accommodates stencils up to 4½ inches in width. Stencils two inches (five lines) or less in depth can be typed on the upper margin; stencils more than two inches in depth, such as the four-inch card, can be typed only on the lower two-inch position of the stencil. Adjustment to handle stencils of any width under 4½ inches can be made by the substitution of a special-length platen.

All the advantages of IBM electric typing have been incorporated in the electric card stencil typewriter.

Surface Atmosphere Selector

Surface Combustion Corp., Toledo, Ohio, has announced the availability of a selector for atmosphere gases which greatly increases the effectiveness of the Surface dew point recorder by enabling it to analyze consecutively atmospheres from as many as six different sources—generators, furnaces, etc., in timed sequence.

The atmosphere selector consists primarily of a six-way valve for six incoming atmosphere sources, motor, and electric time clock; so arranged that at a pre-set time the source of atmosphere supply to the dew point recorder is automatically switched from one line to the next. In the meantime the five remaining lines which are not feeding the recorder are continuously purged so that when the next source is to be analyzed no time is lost in purging. The source from which the atmosphere being analyzed is indicated by numbered (1 to 6) pilot lamps on the control panel of the machine.

In addition to the indicating lamps, three additional controls are provided. A push button on the panel, when pressed, will manually transfer the inlet valve to the next station or source line. The frequency at which atmospheres may be analyzed for dew point is set by the large control dial in the center of the panel. An "on-off" switch is also included.

The atmosphere selector is enclosed in a cabinet approximately 10½ inches high, 21 inches long, and 13½ inches deep. A door on top of the cabinet gives easy access to the interior.

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New Products

(Continued from page 39)

8,000 Pound Capacity Fork Truck

Automatic Transportation Co., 149 W. 87th St., Chicago 20, Ill., announces the latest addition to its line, the Skylift Brawny, a fork truck capable of handling loads of from four to eight thousand pounds.

With a standard collapsed height of 83 inches, the four, five, and six thousand pound models will lift to 124 inches, and the seven and eight thousand pound models will lift to 115 inches. At the same time, hydraulic lift telescopic action enables the trucks to tier under low ceilings as low as 84 inches, the forks and uprights being raised independently by separate rams.

The design of this truck features high-pressure hydraulics, making it possible for the trucks to be smaller, lighter and more efficient than before, and the newmatic controller, functioning as the electric counterpart of automotive automatic gearshift.

Skylift Tiering Pallet Boxes

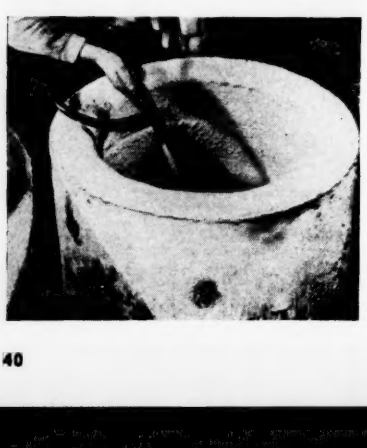
Refractory Coating

Whitman Co., 1407 Esperanza St., Los Angeles 23, Calif. has developed a product which they call vitroseal, a refractory coating claimed by the manufacturer to be the ideal insulative coating for preventing spalling action, resisting heat penetration and decreasing carbon, slag and clinker adherence in fire boxes, furnaces, and crucibles.

This coating is said to form a semi-glazed protective monolithic wall of from 8.5 to 9 hardness between fire and the fire brick that is impervious to heats up to 3390 degrees Fahrenheit, and to withstand the destructive effects of flame impingement and abrasion.

A spray or brush may be used to apply this coating which is shipped to the user in powder form needing only to be mixed with water before application. One pound covers approximately seven to eight square feet.

Vitroseal Refractory Coating



Hercules Solvents Now Available

Hercules Powder Co., Wilmington, Del., has announced that Dipentene and Solvenol, two economically priced specialty solvents for paints and varnishes, are again available in full supply.

Dipentene and Solvenol are powerful solvents for most natural and synthetic resins and polymerized oils used in oleoresinous finishes. Their slow initial rates of evaporation produce better flow and leveling properties—and consequent ease of brushing.

Both solvents are useful also in the formulation of quick-dry enamels and varnishes, where they promote a thorough drying. In addition they act as excellent wetting agents for pigments.

Weldomatic Welder Package

Westinghouse Electric Corp., 306 4th Ave., Pittsburgh 30, Pa., has announced the availability of what they claim to be the first complete package of automatic welding equipment engineered, built and sold by a single manufacturer.

The standard weldomatic head, suitable for welding with alternating or direct current, operates with a capacity of 1200 amperes a-c. Special nozzles are available for 2000 amperes a-c. Capacity for d-c welding is 800 amperes. The head is so designed that it can be rotated 360 degrees in the vertical or horizontal plane. As a result, it can be mounted in any position for welding. Nozzles and knurled drive wire feed rolls are supplied to accommodate ¼-inch, 5/32-inch, 3/16-inch, and ¼-inch wire diameter. Wire feed is automatic. The speed of the driving motor is controlled by the burn-off rate of the welding wire through a bridge hook-up consisting of arc voltage, control generator field and a potentiometer.

Purifying Machine

American Associates, Inc., Automotive Products Division, 1728 Fairmount Ave., Philadelphia, Pa., has announced development of a device which it is claimed will give greater safety for garage workers through the elimination of the causes of headaches, nausea and eye strain.

Weighing only fifty pounds, the device operates on ordinary 110-volt alternating current, and will purify the air in a working area up to 6,000 square feet within ten minutes through the production of ozone, say the makers. It is said to be especially adaptable to garages, bus terminals, and other inclosed places where fumes of gasoline combustion are prevalent.

Home Water Filter

The Davis Manufacturing Co., Plano, Ill., announces a self-cleaning, self-sealing water filter for home faucet use. This filter features a permanent micro-mesh monel screen with a filtering medium of 40,000 apertures per square inch, which removes from tap water such suspended impurities as lime, rust, dirt and moss. It may be cleaned periodically by merely reversing the position of the filter. The rubber leaking stream directs water in a twist-flow motion to prevent splashing.

Trade-named the "Aqua-Pure," this filter is styled in various plastic colors.

Magnetic Separator

Multifinish Manufacturing Co., 2116 Monroe Ave., Detroit 7, Mich., has recently introduced a load-releasing, light-weight, adjustable hand magnet of the permanent (non-electric) type for rapid handling of steel.

Completely self-powered and requiring no current, wires or batteries, the unit is operated with one hand and lifts up to 15 pounds. It releases its load when a finger-tip lever is raised. Within the moisture-proof aluminum and stainless steel case are two 4-inch Alnico magnets which, it is stated, will not lose power, regardless of kind or length of use. It requires no servicing and has nothing to get out of order. Dimensions are 3 inches by 5½ inches by 8 inches; weight 3¾ pounds.

Known as the Multilift Model S Magnetic Separator, the magnet has been saving both labor and material, according to the manufacturers, in drawing steel parts from tumbling media; handling nuts, bolts, screws, nails and small parts; separating stacked steel strips; removing heat-treated parts from carbon; handling hot or cold parts; separating steel from non-ferrous materials of many kinds such as brass, chemicals, foods, fibres; and in salvaging steel parts or particles from aisles, assembly lines, etc.

Air Drive Mixer

Union Tool Corp., 310 E. Market St., Warsaw, Ind., has announced to the trade a mixer powered by air. The manufacturer claims that it will mix any adhesive that an oscillating beater can handle, and that one of its features is that it mixes inflammables safely, without sparks or static. It is powered with a sturdy air cylinder that operates simply by turning a valve on; the more air, the faster the beater oscillates.

It is sturdily built of welded steel with liberal strength tolerances for every part. It can be equipped with either hot or cold jackets to meet any special need, and there is sufficient power to mix heavy materials without stalling.

The mixer is available in two practical sizes, one with a working capacity of ten gallons and the other with a working capacity of twenty gallons.

"Transfer-Matics"

Cross Co., Detroit, Mich., announces a development known as "transfer-matics" for machining auto axles and designed to do the work of a whole department of men and machines.

In operation, an attendant places unfinished axles, two at a time, on a platform. At the push of a button, the platform raises, lifting 2 axles out of the whole line of machines. It then travels along, lowers, and the axles are again surrounded by a mass of machinery and tools. At the delivery end of the line two finished axles are left to be taken away.

A coolant flows under the machines to lubricate and cool the tools. This fast-flowing stream is also used to collect the metal shavings which are a by-product of the process. These are automatically drained and transferred to a collecting station.

Hercules Adds Six Diesels and Two Gasoline Engines

Hercules Motors Corp., Canton, Ohio, builders of diesel and gasoline engines, has completed the development of a number of engines the past year, both diesel and gasoline.

In the diesel class the company has added six models to its line. These engines, like the entire nine series and twenty-two models of diesels it builds, are of the high-speed, light-weight, heavy-duty type.

Model DIX-6 is a small six-cylinder diesel with a 3¾-inch bore and 4-inch stroke. This engine is capable of operating successfully at speeds up to 3000 r.p.m. The stripped engine develops 93 H.P. and only weighs approximately 750 pounds. Because of its low weight, plus the fact that its over-all dimensions are approximately those of the gasoline engines of similar displacement, conversions can be readily made without fear of any compromise in performance.

Model DIX-4 is a 4-cylinder diesel engine that parallels the model DIX-6 as described above in design, performance features, and in its interchangeability with gasoline engines of similar power capacity. This four-cylinder engine is built in two different bore sizes. The 3¼-inch bore and 4-inch stroke engine develops 46½ H.P. at 3000 r.p.m. The 3¾-inch bore and 4-inch stroke engine has a power output at 3000 r.p.m. of 57 H.P. The stripped engine weighs approximately 900 pounds.

While Hercules Motors Corp. sensed the postwar trend for flat, "pancake" type of engines as far back as 1938 for under-floor, "mid-ship" installation, and built a number of them since that time, it was not until the past year that the opportunity presented itself to round out the Hercules line. Three models of flat diesel engines have now been developed.

Model DJXHF horizontal engine develops 99 H.P. maximum power at 2600 r.p.m. The stripped engine weighs approximately 900 pounds.

Model DWXLDF horizontal engine with 4½-inch bore and 5-inch stroke develops 142 H.P. at 2600 r.p.m. Piston displacement is 426 inches. The stripped engine weighs approximately 1300 pounds.

Model DFXHF develops 260 H.P. at 2100 r.p.m. The stripped engine weighs approximately 2600 pounds.

The Hercules DNX-V8 is a 45° V engine. It is the commercial outgrowth of a 32-cylinder engine Hercules built for the United States Navy during the war and which, at that time,

went through exhaustive tests and proved sound in design, principle of operation and construction. The Model DNX-V8 is built in three sizes.

To the Hercules line of 13 series and 27 models of high-speed, heavy-duty gasoline engines have been added two models especially designed to meet the greater need for stepped-up power requirements.

The 6-cylinder model TDXB has a 4¾-inch bore and 5¼-inch stroke. It develops 160 H.P. at 2600. Piston displacement is 474 inches. The stripped engine weighs approximately 1345 pounds.

The 6-cylinder model RXLDH is another high-speed, powerful, heavy-duty gasoline engine. It has a 4¾-inch bore and 5¼-inch stroke. It develops 180 H.P. at 2600 r.p.m. and has a piston displacement of 558 inches. The stripped engine weighs approximately 1470 pounds.

Twin Barrel Lifter

Merrill Brothers, 56-04 Arnold Ave., Maspeth, N. Y., announce production of this dual clamp which is the adaptation of the regular Volz clamp to a form adaptable to the barrel. The device consists of a cross arm of the width of the standard barrel, with a Volz clamp attached to both ends of the arm. The center of the cross bar is provided with a ring through which the hook of the hoist or other lifting media is attached. The clamps can be instantaneously attached and detached to and from the barrel, and the heavier the load, the tighter is the grip of the clamp.

These units are sold through leading hardware jobbers and mill supply houses.

Reamers

Arseneau-Price Co., 10840 E. Warren Ave., Detroit 13, Mich., announce the manufacture of a complete line of standard straight-shank chucking reamers, straight and spiral flute from one-eighth to one-half-inch in diameter, inclusive. This company also manufactures special reamers, end mills, milling cutters and counterbores of one-half-inch diameter or less.

They have engineered and built a new type of machinery for the processing of tools which, they say, enables them to produce these standard and special tools at a price advantage to the trade. All such tools, whether standard or special, are manufactured of 1S-4-1 steel, and heat-treated by the electric salt bath method. High standards of workmanship and precision tolerance are maintained.

Airtherm Heaters

Airtherm Manufacturing Co., 702-C S. Spring St., St. Louis 10, Mo., manufacturers of direct fired heaters, propeller fan steam unit heaters, and blower fan steam unit heaters, announce the addition of a new type heater to their line, convector radiators for hot water and steam heating systems.

These convector radiators are equipped with non-ferrous heating elements, constructed of seamless copper tubes, brazed into copper alloy headers. Non-ferrous fins are mechanically bonded to the tubes, providing maximum heat transfer. All edges and corners of front panel are formed to a one-inch radius, providing well rounded surfaces for safety and pleasing appearance.

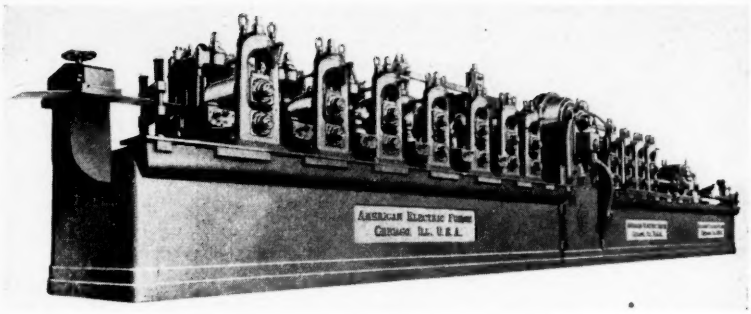
Airtherm convectors are available in three types: "F" free standing or partially recessed; "W" regular wall cabinet; "S" sloping top wall cabinet, and are packed for shipment in clearly identified, individual cartons.

Voltage Tester

Ideal Industries, Inc., 1423 Park Ave., Sycamore, Ill., announce a voltage tester for testing continuity of circuits (AC or DC), 110 to 550 volts AC, 110 to 600 volts DC, blown fuses, grounded side of line, grounded side of motor or appliance, excessive leakage to ground, frequency (25 or 60 cy.) and DC polarity.

According to the manufacturer, this tester eliminates the possibility of error and danger present when using the old-fashioned test lamp. Indications are by a solenoid indicator and a neon test lamp. This gives double protection; each operates independently of the other. Securely anchored 2-foot leads are brought out through top of case, which makes it easy to handle and easy to read.

The Ideal voltage tester is sturdily constructed and encased in a plastic case, with a scale calibrated from 110 to 600 volts. Overall length is 6 inches. Leads are 2 inches long. Test prod handles are 4 inches long. Test prods are 2 inches long. Comes complete in carrying case with belt clip. Weight, 8 ounces.



Mill for converting strip into standard weight pipe

Office Equipment

Moldmaster, Inc., 899 East 149th St., New York 55, N. Y. announces plans for production of the following pieces of office equipment: (a) personal file made of phenolic sides, with metal body or housing, and comes equipped with a phenolic handle and a modern lock. This item comes equipped with index, and has an expandability of 3 inches, making all of the documents within the case completely accessible and available. The approximate size of the file is 13½ inches wide by 10¾ inches high by 6-5/16 inches deep, and its total weight is five pounds; (b) "Glido" executive slide card cabinet, constructed of phenolic plastics and steel or aluminum. The slide arrangement will be either of rolled or extruded aluminum or extruded polystryene, in order to assure a greater degree of dimensional stability. The card holder is made of acetate, and is standard equipment; (c) "Glido" stationary cabinet, constructed of the same materials as the two mentioned above, this cabinet will be divided into five compartments, three for letterheads or private letters, and two for envelopes both short and standard size; (d) hinge-covered card cabinet, composed of the same materials as the others, this unit will eventually be furnished with a lock and will house approximately 800 cards. This item will come in a series to handle 3 by 5, 4 by 6, and 5 by 8 cards.

Low Cost Resin Alcohol

Hercules Powder Co., Wilmington, Del., has announced the commercial production of low-cost resin alcohol made from resin, which has potential application in a wide number of industries including textile, rubber adhesive, detergent, paint, varnish, and lacquer.

The product is called hydroabietyl alcohol. According to the company, it is the first commercially available primary alcohol developed from resin, one of the cheapest organic acids available. It represents the latest in a long series of chemical products developed by Hercules in more than a quarter-century of research in resin chemistry.

Hydroabietyl alcohol is a viscous liquid at room temperature. It is colorless, tacky, and not miscible in water, in contrast to more commonly used alcohols. Of all resin derivatives, it is the most resistant to discoloration and degradation by light or air.

The similarity of the properties of hydroabietyl alcohol to the properties of other high molecular weight alcohols, plus the fact that it is resinous in nature and low in cost, indicates a wide variety of industrial applications. It can be used without further chemical reaction as a modifier for chlorinated rubber, polyamides, hydrogenated oils, textile sizes, rubber compositions, and essential oil vehicles. Commercial production of this alcohol will be carried out in a unit of Hercules' new $3,000,000 plant at Burlington, N. J., designed especially for the production of chemicals derived from resin.

Ellinwood Tractor

Ellinwood Industries, Los Angeles, Calif., has designed and is producing a new tractor. The unit was offered as the latest and largest member of the company's "Cat" line.

It is designed specifically to meet the requirements of farm equipment and will deliver more than 5 horsepower when using gasoline, and only slightly less horsepower when using kerosene or 45-octane diesel fuel. It comes in two models, H and T, with the H specifically designed to work in high crops. Both models come equipped with either rubber pneumatic tires or steel wheels.

Tube Unit Converts Strip Steel Into Standard Weight Pipe

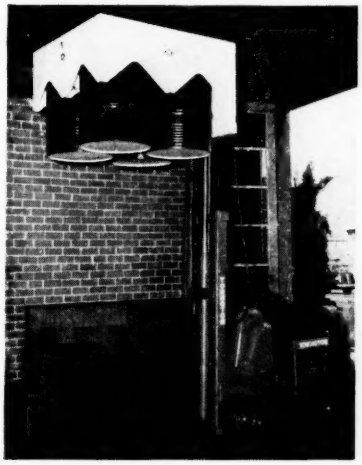
American Electric Fusion Corp., 2600 Diversey Ave., Chicago 47, Ill., announces that it has developed a mill for converting strip into standard weight pipe with diameter sizes ranging from ½ inch to 2 inches, inclusive. The mill transforms coils of flat strip into electrically welded pipe at speeds up to 65 feet per minute, depending on diameter. The pipe is formed, welded, scarfed, sized, straightened and cut to length in one continuous automatic operation. The finished pipe possesses the same strength and qualities as the original strip from which it is formed, and the welded seam has a greater strength than the parent metal. The mill will produce pipe to meet all required pressure tests, and in accordance with all specifications for electrically welded American standard weight pipe.

The manufacturer claims that pipe of the sizes mentioned can be produced with a low capital investment and a low operating cost per foot, due to the minimum amount of labor required to operate such a mill.

Fork Truck Attachment

Pallet Engineering Co., 725 Second St., San Francisco, Calif. announces manufacture of the Tray-Hart multiple drum carrier which they claim to be a new and acceptable fork truck attachment which will solve the majority of industries drum handling problems. The features of this attachment are: it grips firmly and gently from one to four drums at a time, and quickly picks them up or releases them; a positioner allows five inches either side of center thereby eliminating time wasting spotting by the driver; handles drums with two inch diameter variances and six inch heights in one operation. In addition, the attachment can be easily removed in ten minutes, the operator has full vision, only one man is needed and man handling of drums is done away with. This attachment fits any fork type power truck.

Pallet Truck Device



(Continued on page 42)

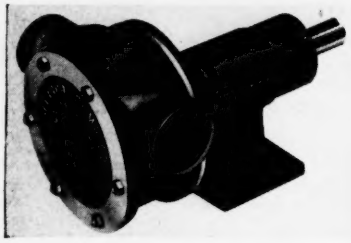
New Products

(Continued from page 41)

Self-Priming Pump

Jabsco Pump Co., 2031 N. Lincoln St., Burbank, Calif., has recently announced its stainless steel (18-8 Mo., type 317) pump, intended primarily for use in chemical, industrial, dairy, bottling and food applications.

Like previous Jabsco models it is extremely simple in construction, having only one moving part: a tough flexible impeller made of neoprene compound selected for its chemical inertness as well as toughness and wear resistance. The natural resilience of the impeller results in automatic compensation for wear in the pump body, and facilitates passage of suspended solids without jamming. The



Jabsco Self-Priming Pump

pump primes automatically, operating suction being in excess of 27 inches of mercury.

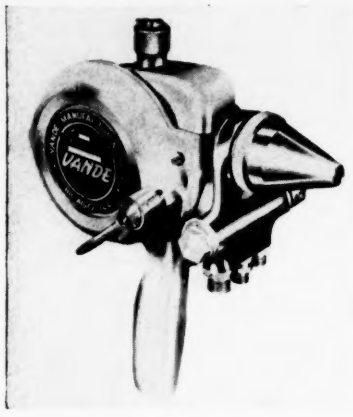
Although larger sizes and smaller sizes are scheduled for early development, the pump is available at the present time with provision for one and one-half inch pipe connections only.

At 1750 RPM it delivers 55 GPM at 0 psi head, and 38 at 25 psi head. The pump is suitable for sustained operation up to 25 psi. Slightly higher pressures permissible for intermittent and irregular operation.

Metallizing Gun

Vande Manufacturing Co., Chicago, Ill., has introduced a metallizing gun which the manufacturer reports provides faster and more thorough application of metals such as steel, aluminum, zinc, lead, bronze, copper, nickel and others.

According to the company, the gun completely eliminates backfire, and is equipped with a nozzle which incorporates a new development of mixing the gas and oxygen at the point of



Vande Metallizing Gun

combustion. Each wire nozzle is specifically designed to provide the exact volume for the gas used; acetylene, propane, or other gas. No air cap adjustments are needed. It features the finger-tip turbine control. Positive turbine control is achieved by a compound turbine containing a rotor and stator responsive to opposing propulsion fluids. One propulsion fluid jet remains in a fixed position in the primary turbine. A second is directed by a control lever in the secondary turbine and either reduces or increases the turbine speed, thus affording complete wire feed control at all times.

Synthetic Resin

A synthetic resin, designed specifically for use in printing inks, is now being commercially produced by Hercules Powder Co., Wilmington, Del.

The resin, called Pentalyn 802-A Pale, enables production of over-print varnishes of improved initial color and reduced after-yellowing, and imparts better color in printing inks. It is designed to aid ink technologists to secure greater uniformity in ink vehicles based on phenolic-modified rosin esters.

This product imparts a high viscosity to linseed and China wood oil overprint and gloss ink vehicles, without sacrificing varnish stability or pigment reactivity. According to the company, this resin is produced in a color range significantly paler than that of other phenolic-modified rosin esters.

Pentalyn 802-A Pale is a phenolic-modified pentaerythritol ester of rosin and is the latest in the series of pentaerythritol resins developed by Hercules. It is one of the synthetic resins developed specifically for use in printing inks.

Reversible Portable Gravity Conveyor

Island Equipment Co., 101 Park Ave., New York 17, N. Y., has developed a two-in-one portable roller gravity conveyor, one side of which the rollers are set high above the side rails, allowing the handling of any packages or parts that are wider than the frame, the other side of the conveyor having the rollers sunk below the level of the side rails, which permits conveying only items not wider than the distance between the two rails.

Being light in weight, any operator can quickly turn these conveyors over for the type of work to be handled. With the rollers in high position, cartons and cases up to 24 inches wide can be accommodated, and when inverted with the rollers in low position, cartons, cases, rolls of paper, kegs, etc., can be carried. The legs are supplied in double post type, with adjustable high units varying from 12 inches to 72 inches. The sections are 10 feet long and 90-degree curves, widths inside frame 14⅜ inches or 16⅜ inches, rollers 2 inches in diameter by 16 ga. with rolled ends set on 4-inch centers.

Gas Water Heater

Coleman Co., Inc., Wichita, Kan., has developed an automatic water heater engineered to use butane, propane or any mixture of liquefied petroleum gases.

The outer casing of the heater is finished in white plastic enamel, and has two inches of blanket-type fiber glass insulation on top and sides. Three sizes, 20, 30, and 45-gallon storage capacity, are offered. The smallest of the three occupies overall floor space of 19½ by 19 inches and is 47 inches in height. The largest of the three is 23½ by 23½ by 60 inches.

A feature of the new appliance is its all-steel atmospheric burner. Ribbon-type gas ports, raised approximately one-half inch above the burner body, are shaped to permit secondary air to make free contact with the flames. This insures complete combustion, say the makers. The burner is easily removed for inspection and servicing. It is equipped with 100 per cent safety pilot. Other features include a full-length dip-tube, removable flue baffle, off center heat exchanger tube, heavy galvanized storage tank and conveniently placed lighter door and drain cock.

Registration Control

Ripley Co., Inc., Middletown, Conn. has developed a registration control for use with packaging machines using web-fed wrappers. The control is said to be so highly color-sensitive that correction in the positioning of the wrapping material is possible on such low color contrasts as red or brown on yellow, even though the marks are as fine as .015 inches.

The control consists of a scanner and amplifier and built-in relay with connections provided so that the cam of the feed of the packaging machine automatically corrects the position of the label whenever the web of material gets out of register due to slippage or stretching inherent in material of this kind.

Small Inductor Unit

Miles Reproducer Co., Inc., 814 Broadway, New York, N. Y. has developed a midget inductor unit which requires no electrical connection with the telephone wire. It measures one-quarter inch in thickness and one inch in diameter and fits over the outside of the earpiece of the standard desk or wall-type telephone. It may be placed inside or underneath of the desk, cradle type telephone or may be concealed inside the ringer box on the wall.

It is designed to operate with the standard radio receiver, phonograph or microphone amplifier, or any type disc-wire-film cylinder electric recorder for group loud speaker listening or recording of two-way personal and business conversations. Net weight is about one ounce.

Spark Plug with Built-in Resistor

Electric Auto-Lite Co., Toledo, Ohio, recently announced the development of a spark plug with a built-in resistor which surpresses spark plug interference with radio, radio-telephone, radar, and television reception, say the makers.

The company states that this plug will provide smoother operation and improved economy for car owners. It features a built-in 10,000 ohm resistor which reduces electrode erosion up to 200 per cent and more, thus allowing for a wider gap setting.

Power Belt Conveyor

Rapids-Standard Co., Inc., 342 Peoples National Bank Building, Grand Rapids, Mich. has recently introduced a standardized multi-purpose power belt conveyor, the Floor-Veylo, Jr.

It is designed primarily as a low cost conveyor for moving medium weight loads between floors or horizontally, and supplements

Floor-Veyor, Jr.

the regular heavy duty standard Floor-Veyor power belt conveyor.

Built in lengths which are multiples of two and one-half feet up to thirty feet, this machine may be remodeled by a purchaser to meet a changing need at any time by addition or removal of standardized sections of conveyor bed and lengthening or shortening of the belt.

Dow Announces Price Rise

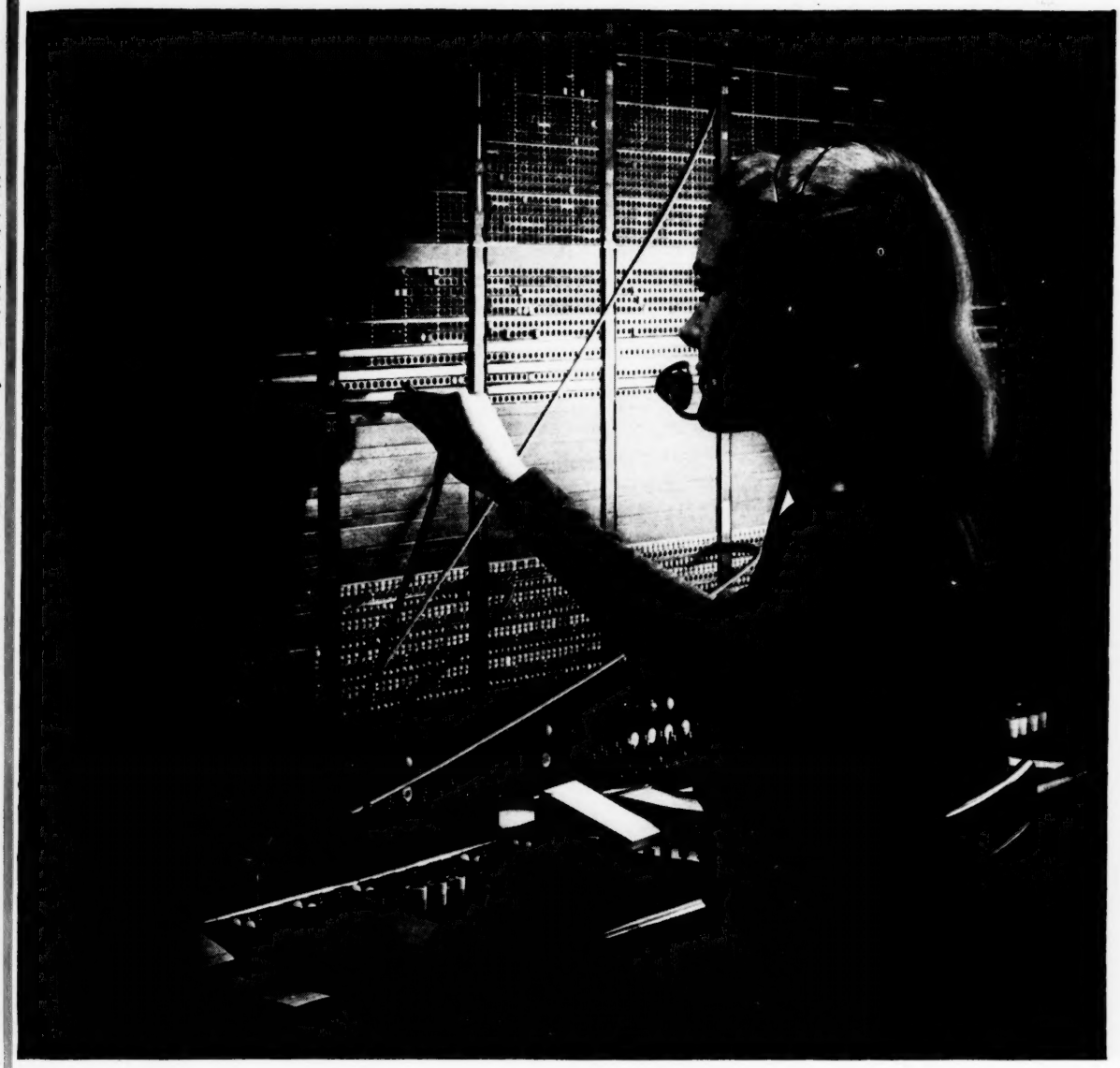
Dow Chemical Co., Midland, Mich., has announced that future orders of virgin magnesium ingot will be priced at 20½ cents per pound base, f.o.b. Freeport, Tex. The new price which became effective December 1 is expected to increase the cost to customers an average of 1 cent per pound. Magnesium alloys and structural products are not affected, the company stated.

Vinyl Package

Vanguard Corp., Springfield 3, Mass., has produced a vinyl plastic envelope complete with snap fastener to package the Eversharp Shick injector razor. Clear vinyl is used in this container.

The material is electronically sealed at the edges, and provides a strong weld that, the manufacturer claims, will stand up under long usage. Vanguard Corp. states that other packages of a similar type may be made in any color in which vinyl can be obtained.

(Continued from page 44)



IN THE DARK SILENCE OF THE NIGHT

Bell Telephone service isn't a 9 to 5 service. It is one of the few services in the world that are always available to the public... twenty-four hours a day, Sundays and holidays.

In the dark silence of the night there is one light forever burning — one voice that is never stilled.

That light is the light of the Bell Telephone Exchange. That voice is the voice of your telephone. Its very presence brings a feeling of security, whatever the need or the hour.

Service in some countries shuts down with the end of the day. Bell System service keeps on going the whole twenty-four hours of the day and night, Sundays and holidays.

It costs us more that way but we know that is the way you'd like to have it.

BELL TELEPHONE SYSTEM

XUM

NEW PRODUCTS

(*Continued from page* 42)

Motowlift Fork Lift Truck

Motowlift Fork Lift Trucks

Service Caster & Truck Corp.'s Ford- powered Motolift 1948 fork lift trucks are in production at the company's plants in Albion, Mich. and Somerville, Mass.

Some features of the 1948 Motowlift are: All controls and the new full-vision instrument cluster are incorporated in the steering column. A single lever at the driver's finger-tips controls all hydraulic operations. The ingenious design of the seat frame and floor plates provides immediate accessibility for maintenance. In a matter of seconds the engine and hydraulic system may be fully exposed for inspection and service. Refinements in the 1948 model mast include inclosure of the top mechanism to lessen the drifting of foreign matter into the ram assembly. A specially designed, heavy duty transmission and improved steering arrangements are further advancements in the 1948 Motowlift.

3000 and 4000 pound solid rubber tired models in 108- and 144-inch lifts are on service production lines now.

Single Stroke Lift Truck

Single Lift Truck

Lyon-Raymond Corp., Greene, N. Y. announces a single stroke lift truck for use with skid loads up to 2500 lbs.

Exclusive features claimed for this new truck include greater under-clearance for negotiating ramps and, lightweight, both made possible by a single frame design incorporating the use of heavy gauge formed steel plate. Large 8 inch diameter frontwheels equipped with Timken Roller Bearings are supplied on all models to insure easy rolling.

Other desirable features offered include a 180° operating radius, push button action to engage the lifting device, safety lock on handle to prevent injury to operators and a built-in hydraulic release check.

This truck is available in a wide range of sizes for use with all popular size skid platforms.

Trade Literature

Dixie Issues Catalogs

Dixie Manufacturing Co., 1310 Russell St., Baltimore 30, Md., has recently issued two pamphlets; one entitled "Stainless Steel," and the other entitled "Dust Collectors," Nos. 47A and 47B respectively.

The first of the two describes the research, designing and engineering that goes into the manufacture of the numerous stainless steel products made by the company, and it is generously illustrated with examples of these products, ranging from equipment used in the making of salad dressing to materials used in building and architecture.

The other pamphlet deals with Dixie dust collectors, exhaust fans, etc. It is replete with drawings and photographs of these machines, plus specifications and charts concerning these products and their operation.

Allis-Chalmers Describes Kilns

Rotary kilns for cement, lime and chemical plants are described in a new 32-page illustrated bulletin No. 07B6368 issued by Allis-Chalmers, Milwaukee, Wis.

The bulletin shows how efficient design is vital to the economical operation of wet or dry process portland cement plants, why process industries are installing rotary kilns for better product control and lower cost, and how Allis-Chalmers experience and facilities serve users of rotary kilns. Also discussed and portrayed are Allis-Chalmers construction features.

Increasing use of long, multi-support rotary kilns has brought about development of easily-aligned, two-roller carrying mechanisms to support them. Their design and construction are described in the bulletin, along with that of kiln drives, various types of feeders, completely centralized kiln control equipment, air-quenching and rotary coolers, dryers and furnaces.

Data of interest in connection with the selection of rotary kilns, coolers and dryers and the calculation of horsepower to drive them is presented as well as a description of auxiliary equipment for cement plants and pyro-processing operations.

Hercules Publishes Clorafin Data

Information on many applications for Clorafin, Hercules Powder Company's chlorinated paraffin is included in a booklet, recently published by Hercules Powder Co., Wilmington, Del., which also covers revised information on the use of Clorafin in flame-proof and weather-proof textile coatings.

Considerable interest has been evidenced in the use of Clorafin 42 as a low-cost plasticizer in pigmented vinyl coatings for cloth and metal and as a plasticizer for vinyl plastics. The booklet includes the results of tests of vinyl coatings and vinyl plastics containing Clorafin.

Other new applications mentioned include the use of Clorafin 70 as a moisture-proof coating for plywood and its use in combination with Parlon, Hercules chlorinated rubber, in chemical-resistant finishes for metal. Clorafin 70 appears to be an effective barrier against moisture vapor transmission through plywood panels.

Also discussed in the book are the general properties of the various types of Clorafins. An appendix to the booklet lists all trade names mentioned in the text and includes the chemical identity of these trade names, together with their owners.

SELF-CONTAINED BOILERS

Two (2) 250 H.P. each, KEWANEE hor. return tube, built 1941, Natl Brd. stamped, 125# pressure, with or without Riley stokers.

Immediate delivery

M. J. HUNT'S SONS

1600 N. Delaware Ave., Phila. 25, Pa.

Duriron Describes Valves

A new bulletin released by The Duriron Co., Inc., of Dayton, Ohio, describes Durco corrosion-resisting, Series 35 Y valves and Series 36 Angle valves and shows their internal construction by means of cutaway views.

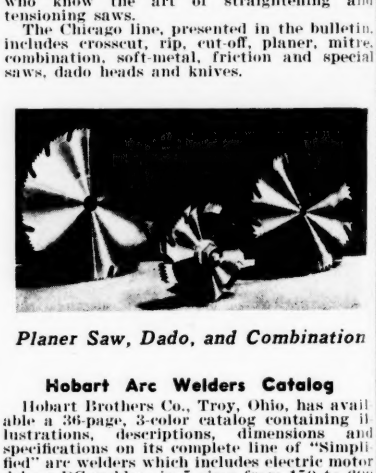
These illustrations bring out every construction detail and show, in color, exactly which parts of the valve are made of a special corrosion-defeating Durco alloy. Features are listed and a brief explanation of the type of service for which the valves are best suited, is given. The bulletin provides complete dimension data on the various sizes and includes an illustrated parts list.

The folder also tells how the valves can be equipped with air operated diaphragm motors for automatic regulation of the flow of corrosive solutions.

Chicago Saw Works Bulletin

Bulletin No. 107, just released by Chicago Saw Works, 5035 Wentworth Ave., Chicago, Ill., has been compiled to provide a convenient guide in determining which type and size of circular saw to use for a particular job. The bulletin illustrates and describes many types of saws and circular knives, and shows saws being made. These saws are individually balanced; ground on the latest Blanchard and Heald machines which remove the stock evenly, insuring a well-balanced, quiet running saw. It points out how Chicago Saws run true because they are tensioned by old-time craftsmen who know the art of straightening and tensioning saws.

The Chicago line, presented in the bulletin, includes crosscut, rip, cut-off, planer, mitre, combination, soft-metal, friction and special saws, dado heads and knives.



Planer Saw, Dado, and Combination

Hobart Arc Welders Catalog

Hobart Brothers Co., Troy, Ohio, has available a 36-page, 3-color catalog containing illustrations, descriptions, dimensions and specifications on its complete line of "Simplified" arc welders which includes electric motor driven DC welders in 5 sizes from 150 to 600 amperes; gasoline engine driven welders in 4 sizes from 200 to 600 amperes; AC transformer-type welders in 3 sizes from 200 to 500 amperes; welding generators only in 4 sizes from 150 to 400 amperes; gasoline-engine-driven welders with auxiliary AC or DC power generators, and other models in all sizes for special arc welding applications. Various features comprising the machines are individually illustrated and described, and helpful information is given for various welding problems. Also listed is the complete line of Hobart arc welding electrodes and accessories.

Carboloy General Tool Catalog

A 65-page general tool and carbide parts catalog (Catalog GT-200)—showing its standard cemented carbide products, with specifications and prices—has been issued by and is available from Carboloy Co., Inc., Detroit, Mich. The catalog supersedes the Company's former Catalog 175R and its various supplements.

Among the products shown in the catalog are the new standard line of solid Carboloy boring bars as well as the expanded line of solid Carboloy boring tools.

One of the features of the catalog is the 12-page section devoted to wear resistance applications. In these pages are pictured approximately 100 typical examples of the way in which users in the food, ceramics, textile, watchmaking, wire making, metal working, etc., industries have applied Carboloy cemented carbide to their machines and products. In this section, too, the new method of attaching large sections of carbide with studs, bolts, etc., is pictorially described.

Also included in the catalog are small line sketches showing typical applications of stand

ard carbide tools and suggested uses for various shapes of standard carbide blanks. Also included is a full-page chart (published for the first time) showing at a glance where to use the various grades of Carboloy cemented carbide.

Although Carboloy's line of standard single point cutting tools has not been changed, the tool order numbers have been changed to conform to the standards of the Carbide Industry Standards Committee.

Booklet Describes Generators

In a recent issue of the E-M Synchronizer, Volume 8, No. 3a, published by Electric Machinery Manufacturing Co., Minneapolis, Minn., the firm's "packaged" regulectric AC generator is described which, it is claimed, provides, for the first time, automatic constant voltage without moving regulator parts. The booklet features information on how to apply these generators, with seven tables for generator and wire selection. Also included is information relevant to pre-engineered switchgear for generators, and protective generator construction. The pamphlet is generously illustrated with photographs and charts throughout.

U. S. Rubber Describes Koylon

The United States Rubber Co., Koylon Foam Division, Mishawaka, Ind., has recently published a booklet entitled "The Art of Cushioning" in which they describe the many and varied applications of their product in the upholstering industry.

The booklet is compiled for the upholsterer, and in addition to giving complete explanations as to Koylon Foam; what it is, where it may be obtained and the sizes in which it is available; the booklet is generously illustrated with photographs showing how the product might be used, and with diagrams and specifications designed to aid the upholsterer in his work with Koylon on the various types of seats and cushions.

Maritime Association Annual

Hampton Roads Maritime Association, Inc., 406 E. Plume St., Norfolk 10, Va., announces publication of the official magazine of the organization, "The Ports of Greater Hampton Roads Annual, 1948."

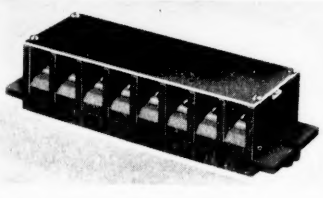
The book describes the Hampton Roads ports, Norfolk and Newport News, Virginia. It embraces, in brief compass, with appropriate illustrations, information regarding commerce of the ports, railroad and steamship services, port terminals, shipbuilding facilities, port regulations, and industrial advantages, and is intended principally for the use of shipping men, shippers, manufacturers and distributors who may be interested in locating business enterprises in this area.

Humidification Bulletin Offered

Controlled Humidification is the subject of bulletin, No. 177, offered by the Armstrong Machine Works, Three Rivers, Mich. This booklet explains the need for humidification and how to achieve it. Included is much reference data on humidification requirements for processing and/or storing a wide variety of materials.

Terminal Blocks with Versatile Applications

Add-A-Point Terminal Blocks, manufactured by the Wolfe & Mann Manufacturing Co., Balto. 11, consist of interlocking units that can be added to blocks in any number and at any time. Each unit consists of a one-piece point and barrier, and an end piece, marking strip and short screws. There are no through bolts, long screws or individual barriers. Add-

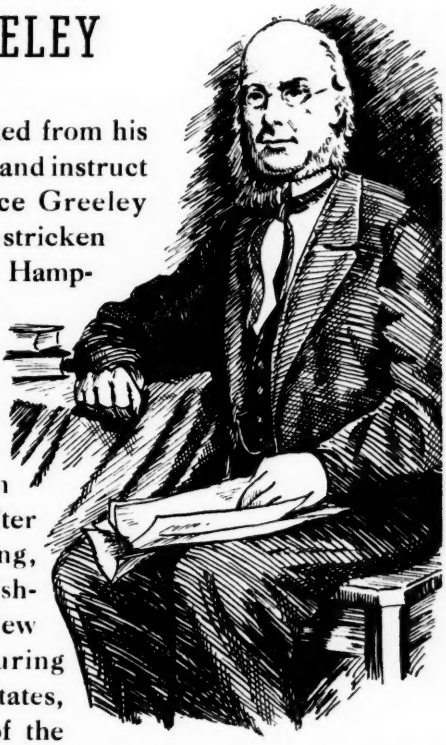


A Point offers no assembly problem, no kit is necessary, and stocking is simplified, say its makers.

Add-A-Point blocks provide perfect unit-by-unit terminal block efficiency for one section or a hundred. They are rated up to 60 amperes and can be operated safely up to 750 volts. Test voltage in excess of this can be successfully applied.

New Hampshire Personalities

HORACE GREELEY



"A man of genius, marked from his cradle to inspire, animate and instruct his fellow man," Horace Greeley was born on a poverty-stricken farm near Amherst, New Hampshire, in 1811. From his earliest days, the printed word attracted him and it is not surprising that he went to New York, almost penniless, in 1831 to start his career. After ten years of type-setting, writing, editing and publishing, he established the New York *Tribune* which, during the War between the States, became the "Trumpet of the Nation." If an 84-hour work week is now forty, it was the *Tribune* that first took up the cudgels for the worker. Greeley organized the first printers' union and was its first president; he instituted the idea of profit-sharing by selling many of his *Tribune* shares to his associates. Despite cutting ridicule, he championed woman's right to vote. A mighty force in the preservation of the Union, he urged the "clasping of hands across the bloody chasm" when such words were not readily accepted by a nation pitched to the emotionalism of civil war. He stands today the model of editors, "doing no man's bidding, but speaking his own thoughts."

NEW HAMPSHIRE
FIRE INSURANCE COMPANY
Manchester, New Hampshire

GRANITE STATE
FIRE INSURANCE CO.
Portsmouth, New Hampshire

Letters

EDITOR, MANUFACTURERS RECORD:

The preview of "The Blue Book of Southern Progress" in the December edition was read with a great deal of interest. This preview clearly reveals the great amount of time, research and analysis it took to compile this report.

It is a feeling of gratitude that the MANUFACTURERS RECORD publishes the "Blue Book" annually for the people of the South.

I heartily recommend that a copy of this Annual Blue Book of Southern Progress be sent to each High School, College and University library in the South. It is a true volume of information of the rapid-progressive development of the South.

Sincerely yours,
James B. Davis,
Director Public Relations,
Associated Industries of Alabama.

December 23, 1947

EDITOR, MANUFACTURERS RECORD:

In your December editorial, "Was Barnum Right?" you refer to the heart-rending tales telling us about the pitable conditions under which Europeans exist.

I recently enjoyed a visit from a business friend who had just returned from spending seven weeks on business in France, Italy, Greece and Turkey, and I questioned him concerning the poverty about which we had heard in those countries. His statement was that he did not see evidence anywhere of any of the people being ill-fed, that on the contrary his criticism was everywhere that they eat too much. He saw no evidence of poverty. In fact, he said, not as much as he would see in any of the cities of this country. He had no trouble getting anything he wanted to eat, just as good meals as he could get in this country, and at prices about two-thirds of what he would have to pay in this country.

He visited a number of cities in Italy and drove by automobile and stated that the streets were so crowded in Rome it was difficult to drive an automobile, that factories seemed to be booming and everybody happy and prosperous.

In Greece there had been considerable destruction of property by the guerrillas, but no destitution that he saw. He stated that all warehouses in the cities were crammed with materials shipped to Greece by the UNRRA and that when he asked one of his business friends why they did not get out some of this machinery and use it on a project in which his business friend was interested the answer was, that there was so much of it in the warehouses there was no room to sort it out, and they are, therefore, doing nothing with it.

In Turkey food was unusually plentiful and cheap.

In Rome anything could be bought in the stores that could be bought in Louisville or Chicago, and at cheaper prices. He understood that things were different in England and food somewhat scarce and hard to get in England, but he did not visit England on this trip.

He stated that in all of these countries he asked his business friends about the Marshall plan in order to get their reaction and was invariably answered with a chuckle that if we wanted to send relief to Europe in order to build up inflation in this country it was perfectly agreeable to them.

He did not in any instance get any expression of gratitude or thanks, but the answer invariably indicated that the Europeans thought our relief to Europe was for our own political purposes here.

My friend says that he cannot afford to be quoted and I am, therefore, not using his name, but it seems to me that what he had to say justifies some further independent investigation and checking as the party I am quoting is a responsible business man.

Yours truly,
C. H. BLACKMAN,
Louisville, Ky.

Port Authority Purchases Savannah Shipbuilding Plant

(*Picture on page 34*)

Announcement of the purchase of the 96-acre Southeastern Shipbuilding plant at Savannah by the Savannah Port Authority was announced this week by Charles J. Musante, executive secretary of that organization as well as the Industrial Committee of Savannah.

With a frontage of 1,500 feet along the Savannah river, with a 32-foot channel, this property contains 15 separate buildings with an aggregate floor space of 200,000 square feet. Buildings are mostly of steel construction, and all have concrete floors. They range in size from 3,000 to 40,000 square feet. Consideration was $345,000.

Leases have already been made on 10 per cent of the available space and deals are pending for nearly thirty-five per cent more. Leases are being made on about a 20¢-a-foot annual rental basis.

The Savannah Port Authority was organized in 1924. This is the only industrial property owned by the organization.

INDUSTRIAL EMPLOYEE TRAINING - II

(*Continued from page 36*)

any one of the nine areas.

Developing a Training Program

1. Classify jobs involved.
2. Outline background knowledge.
3. Develop skill breakdowns.
4. Prepare written programs.
5. Determine method and training location.
6. Review plan with key supervision.
7. Present plan to management.
8. Training instruction personnel.
9. Outline basis of trainee selection.
10. Develop evaluation and follow-up plan.

1. *Classify the jobs involved.* This entails a study of the problems which is felt that training will help. The jobs around which these problems center are considered and the most critical selected as a basis for training. An effort should be made to find as many elements as possible (basic skills, knowledge, difficulties, etc.) which are common to all of the jobs.

2. *Outline background knowledge.* As said before, certain knowledge is necessary in doing each job. Therefore, the items of knowledge which are to be taught should be outlined.

3. *Develop skill breakdowns.* It has been said that the individual must be able to do certain skills. Consequently, it is necessary to isolate these skills and prepare breakdowns for their instruction.

4. *Prepare written programs.* On the basis of this information a written program should be prepared outlining study units, alloting approximate time, and arranging the sequence of topics.

5. *Determine method and training location.* Next, it is necessary to determine what methods of training are to be used and where the training is to be done. There are a number of alternatives from which to choose, depending upon the type of training. These will be discussed in a later chart.

6. *Review plan with key supervision.* Since these men will play a vital part in making the training effective and successful, it is important that they be given an opportunity to review the plan and offer suggestions for improvement.

7. *Present the plan to top management.* Since top management must pay the bill the plan should be presented to them with an explanation of the anticipated benefits, the method of accomplishment and the approximate costs.

8. *Train instruction personnel.* The quality of the instruction can make or break the program. Therefore, it is important that instructors be carefully selected and thoroughly trained not only in the subject matter but also in the skill of instruction.

9. *Outline basis of trainee selection.* Some basis for the selection of the trainees must be established. The basis should contain assurance that the training will be applicable to their immediate jobs, that it will not be a repetition for them, that there will be jobs available for the number receiving the training, etc.

10. *Develop evaluation and follow-up plan.* It is wise from the outset to establish some means of comparison to determine how well this training program is doing the job it set out to accomplish. This may be in the form of production records, scrap reports, cost reports, or graphs of individual performance.

After completion of the initial training a follow-up plan should be exercised to refresh and fix the training in the worker's mind so that it becomes a part of his normal habit pattern.

The next consideration in this analysis for setting up a training program is a further development of item number 5 in the last chart, "Method of Training." The next chart lists 8 different methods of training. The types of content, and the

number of persons to be trained will determine which plan is to be used.

Training and Educational Methods

1. On the job plan.
2. Job rotational plan.
3. Vestibule (off the job) plan.
4. Conference plan.
5. Counselling plan.
6. Institute plan.
7. Observation and Visitation plan.
8. Apprentice plan.

1. *On the job plan.* With this plan trainees are taught as they work. Instruction is given by either the supervisor or by a special departmental instructor.

2. *Job Rotational Plan.* Here the trainee works for a short period of time on a number of different jobs to gain all-around job experience.

3. *The Vestibule plan.* In this plan the training is done off the job in an especially equipped laboratory containing mock-ups or actual machines and equipment similar to that which will be used on the job.

4. *The Conference Plan.* Conferences are used largely in supervision training and are based on the principle of collective thinking on a common problem. One of the major benefits of this type training is in its contribution to the growth of the individual by providing him with an opportunity to express his views in an open meeting.

5. *The Counselling Plan.* Used where the number of trainees is limited and where the problems may differ between individuals.

6. *Institute Plan.* This is a concentrated full-time type of training and involves taking men off the job entirely and sending them to another location for several days of organized training activities.

7. *Observation and Visitation Plan.* In this plan individuals are given an opportunity to observe correct processes being applied.

8. *Apprentice Plan.* Here the trainee must serve a specified time on each of the various jobs which go to make up a trade.

After determining which method is to be used the next consideration is how can the information be most efficiently and effectively taught. The basic requisite, illustrated by the demonstration job, is that the *instructor be skilled in the art of instruction.* In addition to this basic skill there are other techniques or devices which should be used in doing an effective training job. The following chart simply lists these:

Training and Educational Devices

1. Visual aids. (Films, pictures, charts.)
2. Conference Techniques.
3. Case study technique.
4. Presentation or lecture technique.
5. Demonstration technique.
6. Question and answer technique.
7. Manuals, pamphlets and folders.
8. Mock-ups and demonstration panels.
9. Cut-away sections and parts.
10. Operating miniatures.

Conclusion

It is understood that the volume of material which we have just covered has been presented too briefly and too quickly to give an opportunity for full understanding. If, however, the impression has been gained that a training problem must be approached in the same careful analytical manner in which a design or any other problem is approached and is not a matter of simply calling a group of people together, then the effort has been successful.

The company that establishes a well organized training program, intelligently set-up and carefully administered, with the support and participation of top management and the management who will regard this training as a valuable implement at their disposal, will enjoy these important benefits from such training.

When considered in its entirety the task seems overwhelming. However, it is simply a matter of selecting a starting place and working from that point. It may be compared to painting a house which seems like a tremendous project yet it is accomplished with a four-inch brush and a gallon bucket, one stroke of the brush follows another until the project is complete.

The brush and gallon bucket in the problem of training is the fact that to do any job an individual must "know" certain things and be able to "do" certain things.

GIANTS in the world of Water Pumping

Peerless Hydro-Foil MIXED FLOW Pumps

CAPACITIES: UP TO 220,000 G.P.M.
LIFTS: 2 to 60 FEET

Rapidly Move and Remove Vast Volumes of Water Against Low and Medium Heads

Highly successful in the efficient handling of large volumes of water, Peerless Mixed Flow Pumps are being applied to process work, condenser service, liquor and chemical circulation and a variety of industrial services where pumping is desired from open pits, sumps, and surface water sources, such as lakes, rivers, etc. and for large scale dewatering operations.

Peerless has proved the effectiveness of incorporating aero-dynamic streamlining principles to large-volume water lifting, resulting in new conceptions of high efficiences and lower overall pumping and maintenance costs.

Water turbulence accompanying the usual propeller and vane construction, and normally resulting in excess wear, inefficiency and loss of power, are reduced to the minimum in the Peerless Mixed Flow design.

Cutaway view of Mixed Flow multi-stage pump impeller and bowl construction revealing high-efficiency impellers utilized for more economical water lift.

Peerless Propeller Type Pumps

Peerless pumps, embodying the Hydro-Foil principle, are also available in the propeller type and are capable of handling identical capacities of the Peerless Mixed Flow pump. Request Bulletin B-148 completely describing the design, construction and application data of these two outstanding types of Peerless Pumps, for large-volume water pumping.

fmc PEERLESS PUMPS

PEERLESS PUMP DIV. FOOD MACHINERY CORP.
Los Angeles 31, Calif.; Indianapolis, Ind.; Quincy, Ill.
District Offices: Chicago 40, 4554 No. Broadway; Philadelphia Office: Suburban Square, Ardmore, Pa.; Atlanta Office: Rutland Building, Decatur, Georgia; Dallas 1, Texas; Fresno, Calif.; Los Angeles 31, Calif.

The Southern Spotlight

(Continued from page 10)

in Federal and State agricultural programs and in private industry have launched a broad insect control program. Losses were estimated at $13 million for North Carolina; $25 million for South Carolina.

•**Peanuts.** Wet weather delayed and severely damaged peanut crops for Carolina and other southern growers. Carolina losses amounted to more than $20 million. Georgia, Alabama and Florida losses totaled $50 million or 50 per cent of crop value. This loss, cutting urgently needed edible oil, came simultaneously with cotton crop damage. Resulting scarcity boosted cottonseed oil prices 5 to 7 cents per pound at the mills. Linseed oil prices also boomed.

•**Tobacco.** Officials of Federal, state and grower organizations continued to watch the near-demoralized tobacco markets. Crisis source was England's embargo on leaf tobacco imports, causing Carolina growers tremendous losses in market prices. More encouraging, however, were record prices of around $50 per hundredweight being paid in Mid-December for burley tobacco in Kentucky and Tennessee markets.

•**Livestock.** Marketings of livestock at Piedmont centers held at exceptionally high levels; year-end prices were steady near recent peaks. Stockyard operators forecast a shortage of local livestock next Spring because of current marketing, influenced by high feedstuff costs.

EXPORTS

•**Textiles.** Industry spokesmen expressed the opinion that lowered duties on oversea production of yarns and fabrics will have little effect now on this American industry, but that these new import rates may be "absolutely destructive" two years hence. Pointing future competition for Carolina textiles, Britain reported that toward the year end, England's yarn production was higher than any time since 1941 and all cloths output was setting post-war records.

FINANCE

•**Earnings.** Burlington Mills, operating 74 plants, reported fiscal year net sales at the new high of $216,000,000, an increase of 53 per cent over 1946 and 100 per cent over 1945. Net earnings for 1947 were $6.48 per common share, compared with $3.47 in 1946.

Railroads operating in the Piedmont reported increased revenues. Seaboard Air Line's October net was $243,969, an increase of $65,853 over the 1946 month. Norfolk Southern's October net was $30,570 against a $19,841 loss in the same month of 1946. Southern Railway reported October traffic volume at a near-record peak. Motor freight carriers operated at capacity.

•**Bank Deposits.** A deluge of dividend checks flowed into Piedmont banks as 1947 closed. The textile industry was the major source of this distribution, but other divisions of business shared liberally in the prosperity.

South Carolina banking resources increased at more than double the national rate in recent years. The total is $700 million compared with $140 million in 1935—an increase of 409 per cent.

•**Loans.** Bankers continued aggressive promotion of installment financing loans and companies specializing in such financial operations reported large earnings. The payment situation was regarded as satisfactory, though some larger retail stores reported a lagging tendency in payments on open accounts.

•**Clearings.** Charlotte Clearing House Association's preliminary figures put 1947 clearings at the record of more than $3,500,000. The eleven month total exceeded by $200 million the 1946 total.

•**Stocks.** The boom in Carolina over-the-counter market for textile industry common stocks continued through the year-end. In mid-December the average bid for a list of 60 stocks was $117.10 compared with $94.48 in May when the revival from recession fears developed.

•**Municipal Bonds.** South Carolina Highway Commission estimated that $18 million will be expended in 1948 to complete a three-year $60 million road program. An issue of $10 million of bonds will soon be offered.

Gastonia, N. C. sold $930,000 of city water, electric system and sewer bonds, average rate, 2.632 per cent, average maturity, 21 years.

•**Government Collections.** Federal revenue collections in North Carolina totaled $78,675,514 in November, putting total for five months of fiscal year at $486,113,958 compared with $449,371,223 in the same 1946 months.

North Carolina state collections for the first five months of the fiscal year were $55,476,000 or 17 per cent above the 1946 period. Indicative of automotive operations, collections of gasoline and highway taxes totaled $19,561,215 compared with $17,269,307 in the same five 1946 months.

Charlotte's postal receipts, $179,393 in November, were up $20,111 over the 1946 month and for eleven 1947 months were $1,840,956, compared with $1,591,104 for the same 1946 months.

The Southwest

By DAN SUMMERS

Dallas—The inventories of last fall that kept Southwest business worried moved relievingly out of the picture during the Christmas season. A few items stayed on the counters but only because the buyer found that food and housing bills kept paychecks down to small numbers. Other buyers, gambling on their ideas of tomorrow's dollars, went the installment way.

RETAIL TRADE

•**Sales.** Although there is no breakdown as to what was credit and what was cash, department store sales in the Southwest showed a 12 per cent jump for the four weeks, ending December 13 as compared with a like period last year. Houston, swelling with industrial and business activity, scored an impressive 29 per cent gain during the recent four-week period.

PRODUCTION

•**Oil.** Better days ahead were forseen by oil producers. The oil-short East still wanted relief, with crude oil production soaring to new highs from the record fall yields. The industry reported that during October, production in the United States increased to 5,253,000 barrels daily, 11 per cent over last year's October and 50 per cent over the 1939 average daily output. In the Southwest, principally in Oklahoma and Texas, production swelled to 2,593,000 barrels daily, 16 per cent above last year's rate and 74 per cent over the 1939 rate. The demand will encourage drilling activity, searches for new producing areas and extensions of pipelines into areas which are producing below maximum efficient capacity. While this is no sure bet for meeting capacity demand, the Southwest activity offers more fruitful results than could be expected in producing areas outside of the Southwest, which overlies 60 per cent of proved reserves of crude oil.

•**Chemicals.** Another industrial step in chemurgy has been scored by two manufacturers at Weatherford in West Texas.

J. R. Fleming and son, E. T. Fleming have perfected a process of extracting tannin from pecan shell waste. They salvage five tons of the thick, brown fluid from 100 shells. Eastern leather-tannin factories receive the bulk of the Flemings' production.

AGRICULTURE

•**Farm Income.** Estimated farm cash intake for Texas reached $342,210,000 in October, which exceeded the same amount last year by 55 per cent. This gain in intake over October, 1946 is especially significant in view of the fact that gains were expected to be less spectacular for the second half of this year than they were for the first half. Southwest farmers, convinced that the high prices will not hold, have begun digging in for winter and are looking to the special session of Congress for a hint of what's in the future.

SHIPPING

•**Coastal.** In Corpus Christi, businessmen are urging immediate construction of the Padre Island Causeway. Engineering plans are thought to be 90 per cent complete. Work should get underway by January 1, 1948. Efforts are also being made to restore coastwise steamship service between the Corpus Christi port and North Atlantic ports. Newtex Steamship Line has been asked to consider handling the business out of the South Texas port.

CONSTRUCTION

•**1947 Total.** Construction in the Southwest this year will probably be in excess of $600,000,000 as compared with $564,000,000 in 1946 and with an annual average between 1935-1939 of $149,000,000. Taking the dollar costs of construction into account, the year 1947 indicates the possibility of establishing a new record for physical volume of construction activity.

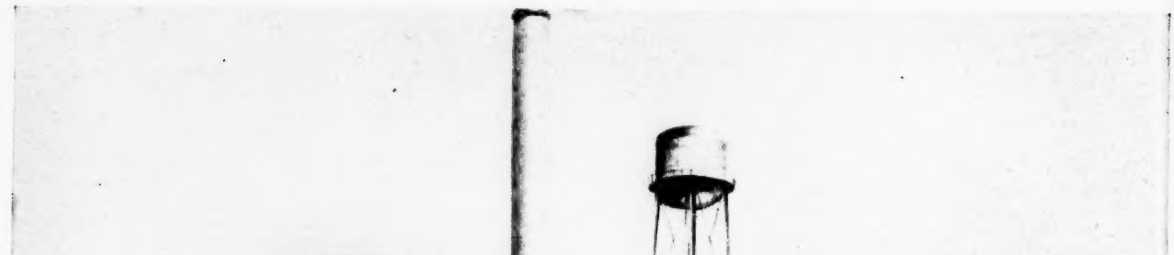
FINANCE

•**Loans.** Banking loans in the Southwest rose to a record high of $973,833,000 resulting mainly from an expansion of $70,402,000 in commercial, industrial and agricultural loans which reflect continuing high prices and strong business activity. Loans have continued to advance during the year and in the five weeks up to November 12, they were double that of the same period of 1946.

•**Bank Deposits.** Influenced largely by farm income, bank deposits totaled $2,978,134,000 in the Southwest district up to mid-November. Demand deposits adjusted and interbank deposits showed significant increases of $64,876,000 and $74,684,000 respectively. The rise in the latter type of deposit reflected a heavy gain in deposits at country banks, resulting from the large marketing of crops at high prices and the shifting of a portion of their surplus funds to correspondent banks.

B. & O. Improvements Should be $250,000,000

More than $250,000,000 should be spent for major improvements and new equipment during the next five to ten years by the Baltimore and Ohio Railroad, it was recently revealed by President R. B. White, who in a report to B. & O. stockholders said "the railroad industry is now confronted with two great opposing forces. On the one hand, we have been faced with a constantly mounting expense level, the principal item of which is wages. On the other hand, we have the growing demand of the public for improved freight and passenger service. We believe the public is entitled to such transportation and the railroad industry should provide it, but it cannot do so unless it has a level of revenues which will meet the cost of service and yield a reasonable and fair return on invested capital."



Above—Test drills and soil studies are being made by Arkansas-Missouri Power Co. preliminary to start of construction on a new steam-electric generating plant to cost more than $5,000,000. To be located near St. Francis, Ark., the plant will have an initial capacity of 30,000 kilowatts with an ultimate capacity of 120,000 kilowatts.

NEW AND EXPANDING PLANTS

COMPILED FROM REPORTS PUBLISHED IN THE DAILY CONSTRUCTION BULLETIN

(Continued from page 14)

for nuclear power plant.

SAVANNAH—Yeiser Chevrolet Co., garage and service station, $25,000.

TEXAS

American Light and Traction Co., pipe line from Texas to Austin field for natural gas, $104,000,000.

AMELIA — Sun Oil Co., laboratory, shop and office building on south side of highway 90, $300,000.

AMARILLO—Southwestern Public Service Co., brick, concrete and steel addition to present plant, and new turbine, more than $5,000,000.

AUSTIN—Austin Baking Co., remodeling and adding to present building, 300 Lamar Boulevard, $143,990.

BAYTOWN—Humble Oil and Refining Co., steel deck, two steel clusters, walkways, protective structures in connection with dredging Michell Bay on Houston ship channel.

BEAUMONT—Gulf States Utilities Co., expansion program, $50,000,000.

BEAUMONT—Sun Oil Co., two story laboratory including shop and office, $330,000.

BROWNSVILLE—City, power plant building, generator, condenser, piping and wiring, $219,843.

BRYAN—Jewett and Sherman Co., canning plant, $200,000.

CLEBURNE—Texas Batteries, warehouse, $30,000.

CORPUS CHRISTI — Central Power and Light Co., improvement program, $17,970,000.

CORPUS CHRISTI—E. Eisenhauer, addition to brick company building, 401 S. Water St., $25,000.

CORPUS CHRISTI — Southwestern Bell Telephone Co., addition and alterations to building, 1301 Lipan St.

DALLAS — Dillon Scale Co., warehouse building, 3905 Elm St., $35,000.

DALLAS — Ford Motor Co., rearranging present facilities, spray booth and ovens.

DALLAS—Fulton Bag and Cotton Mills, bag manufacturing building and warehouse slab, Fitzhugh and Gaisford Sts.

DALLAS—Fred W. Glitsch and Sons, fabricating plant on 10 acre site facing Singleton Boulevard, $300,000.

DALLAS—Gregory and Dillard, post office building, 807 E. Vermont St., $24,368.

DALLAS — Hollywood Manufacturing Co., plant for manufacture of dresses.

DALLAS—F. A. Kandane, Pure Ice and Cold Storage Co., cold storage building and warehouse, Harwood and Cadiz Sts., $40,157.

DALLAS—Paraffine Co., Inc., paint manufacturing plant, Cadillac Place, $100,000.

DALLAS—Peter Paul, Inc., acquired plant, 6124 Denton Drive, altering, manufacturing candy.

DALLAS—Red Arrow Freight Lines Terminal, expansion and remodeling program underway, 1017 S. Akard, $50,000.

DALLAS—Superior Rug and Carpet Co., two-story cleaners addition, $16,850.

DALLAS—Texas and Pacific Railway Co., central sales and bulk station on site of Eagle Ford district, freight terminal and general improvements, $1,500,000.

DALLAS — Western Electric Co., three-story office, buildings and plant, 5331 Mockingbird Lane, $500,000.

DENTON—Ben Ivey, Ford Sales and Service Co., auto shop, sales and service, $79,000.

FORT WORTH—Halton Jewelers, building, 605 Belknap Place, $40,000.

FORT WORTH—Frank Kent Motor Co., building.

FORT WORTH—Cleaves Reah and L. N. Witman, one-story business building, 710 N. Magnolia.

FORT WORTH—Swift and Co., three story addition, North Fort Worth, $37,500.

FORT WORTH—Texas Ice and Refrigerating Co., remodeling building, 1201 Jones, $20,000.

FORT WORTH—Texas Sash and Door Co., warehouse, Rupert and Killiam Sts.

GARLAND—Aven Manufacturing Co., machinery manufacturing plant, $60,000.

GOOSE CREEK—Southwestern Associated Telephone Co., one-story office and warehouse building.

HEARNE—General American Transportation Co., tank car repair shop.

HOUSTON—Banks Moreland Co. and Graver Construction Co., expansion program, warehouses, fabricating shops, McCormick Ave. and Houston Belt and Terminal Railway, $350,000.

HOUSTON—Bettis Corp., warehouse and office building, 66th St. in Supply Row Center.

HOUSTON—Canada Dry Ginger Ale, Inc., bottling plant, Calhoun Rd. and Dumble St.

HOUSTON—Drumex, Inc., drum reconditioning plant.

HOUSTON — Houston Natural Gas Corp., warehouse and headquarters building.

HOUSTON—Kistler's Radar Sandwiches of Texas, food factory in East end, $125,000.

HOUSTON—F. H. Maloney Co., office building and plastics plant, NE corner of Texas and Bastrop, $125,000.

HOUSTON—Rayer Packing Co., rendering plant, 3713 Jensen Drive, $15,000.

HOUSTON—Standard Rendering Co., acquired plant on Southern Pacific tracks and Jensen Drive, plans improvements, grease processing business.

HOUSTON—Texas Pipe Line Co., 107 mile products line from Hearne to Austin to San Marcos; also pump station, dispensing unit and loading unit, latter, $50,000.

LAREDO — Hugh Yates, service station, $10,000.

LEVELLAND—Stanolind Oil Co., natural gas plant.

McALLEN—City, expansion of gas system, laying six inch main across city in north-south direction from Second St.

ODESSA—Gulf Oil Corp., office building addition and guest house, $250,000.

PASADENA — Crown Central Petroleum Corp., purchased gas refinery from WAA for $2,300,000.

ROBSTOWN—G. R. Bishop, c/o Sunspot Bottling Co., planning construction of grandstand, $25,000.

ROBSTOWN—W. R. Marston, Jr., office building near 9th St. and highway 77.

ROBSTOWN—Sinclair Oil and Refining Co., service station, $30,000.

SAN ANGELO—Steve's Sash and Door Co., one-story building, 816 Burgess St., $15,000.

SAN ANTONIO—P. H. Cauthorn, one-story building, SW corner Mistletoe and San Pedro Aves.

SAN ANTONIO — Herpel-Gillespe, truck sales and service shops, 100 block S. Leona St.

SAN ANTONIO — Industrial Investment Corp., building SW corner of S. Flores and west Fest St.

SAN ANTONIO—Milam Chevrolet Co., one-story building on Flores, Martin and Cameron Sts.

SAN ANTONIO—A. Sanches and M. Gonzoles, ice cream and novelty plant, S. Brazos St.

improvements.

TEMPLE — Cocoa-Cola Bottling Co., two-story building, $119,747.

TYLER—Humble Oil and Refining Co., office building addition, 719 W. Front St., $83,000.

VICTORIA—Hoffman Motor and Generator Sales and Service, commercial building, $22,053.

WACO—DeWitt-Clark Lumber Co., lumber yard 924 Franklin St., $30,000.

WACO—Hollywood Manufacturing Co., acquired twine mill of Southwestern Cotton Mills, Inc.

WACO—Western Stove Co., branch factory in buildings erected near McGregor, improvements total $500,000.

WEATHERFORD—Hughes Chevrolet Co., auto sales and service building.

WICHITA FALLS — Williams-Dwyer Co., one-story addition to filling station, 10th. and Polk Sts., $14,000.

VIRGINIA

BRISTOL — Henry I. Gaines, Coca-Cola Bottling Co., plant, $426,823.

BRISTOL—Henry I. Gaines, building for Dixie Cola Bottling Co.

CHARLOTTESVILLE — Charlottesville Woolen Mills, quonset hut type warehouse.

RICHMOND — Richmond Radio Corp., WRNL, elevator in new radio center, $25,000.

ROANOKE—Appalacian Electric Power Co., construction program, $54,000,000, additions to capacities, stations, interconnections, etc.

WINCHESTER—Haldeman Creamery, Inc., remodeling three-story building; adding offices, sales room, bottling, washing, filling and cold storage facilities.

WINCHESTER—Snapp Foundry, Inc., addition for a cleaning and shipping department for castings.

WINCHESTER — Winchester Knitting Mills, planning addition.

WEST VIRGINIA

CEREDO—Truax-Traer Co., Chicago, coal washing and processing plant, $3,000,000.

CLARKSBURG — Hope Natural Gas Co., plans facilities for receiving 200,000,000 cubic feet of gas daily, $1,480,000.

FAIRMONT—Monongahela Power Co., expansion of plant and line facilities, $40,000,000; extension of rural service lines, $5,000,000.

MORGANTOWN — O. S. Chitlum, garage building, University Ave.

Southern Construction at Peace Peak in 1947 with $1,984,654,000 Total

(*Continued from page 32*)

FACTURERS RECORD was $137,436,000. No other southern state approached that figure. Those whose construction contracts were valued above twenty-five million dollars were Louisiana, Missouri, Florida and Mississippi, ranking in the order named.

Texas also was a leader in industrial construction. Its variety of industrial expansions and new plants represented an outlay of well above $151,000,000, which was almost forty per cent of the total for the South. Georgia with its $58,885,000 was second on the list of active industrially expending states. All of the southern states were included, the values ranging from the high of Texas down to $2,155,000.

The $313,942,000 heavy construction total was composed of $198,944,000, or practically sixty-three per cent for such work as dams, drainage projects, earthwork and airports. The $95,717,000 for sewer and water work represented thirty per cent of the total, the balance being for the $26,629,000 value placed on government electric work.

Government building this year has changed its complexion, when compared with the type of work being done with public funds in the preceding twelve months. School building prevailed as the heaviest factor, the total being $202,058,000, as against $97,198,000 for last year. Government building, as such, was valued at about one million dollars more in 1947 than in 1946. The 1947 total was $146,798,000.

If predictions for the country as a whole prevail in the South this year, the value of 1948 construction should be well ahead of that recorded during the twelve months just ended. The expected rise is twenty per cent. This would mean a total of from two billion dollars to two and one-half billion dollars, with a strong possibility that the sum will be higher.

Private building is seen as the largest single factor in this year's activity, thus continuing what has prevailed in the South during the last twelve months when such work led the other types by a substantial margin. The heaviest component, of course, will be residential building, although strength is predicted in other fields as well.

The South's highway program for 1948, if the twenty-six per cent rise predicted for the country is applied to the 1947 figure of $432,784,000, will be well over five hundred million dollars. Probability for larger expenditures for water and sewer construction is also seen. The figure for this type of projects last year was $95,717,000; in 1946, $60,220,000.

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South Carolina State Ports Authority
Dept. MR
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XUM

Potomac Soundings

(*Continued from page* 18)

an industrial entity. While this promise, of course, was completely fraudulent and empty as applied in the Russian occupation zone, which was plundered and denuded by the Kremlin mercenaries to the point of exhaustion, yet the Russian paper promise to thwart the Morganthau Plan remained the basis of substantial appeal to many Germans. This division frustrated every reconstruction attempt of the Western powers in their own zones.

With the Marshall Plan now replacing the Morganthau Plan as the core of American policy, Russia's appeal to German sentiment is gone. Russia now will be compelled to show her real hand, as wrecker of wealth, destroyer of civilizations, and enslaver of peoples.

The tragedy of these three years since Potsdam never can be undone or recovered. But at least we now have acknowledged the monumental folly of the Morganthau Plan, and set another course. About next April or May we shall start all over again in Europe, at about the point we should have begun in May, 1945, with the fall of Hitler. During those three lost years, the American taxpayers have shipped out a little more than $15-*billions* in relief and reconstruction aids to Europe and Asia, roughly 11 per cent of that total going to Russia and her Iron Curtain satellites.

Senator Walter F. George, of Georgia, was among the first to warn against a too dismal view of the London Conference.

"I think it would be perhaps too strong to say 'the failure at London'," Senator George said. "Because now that we have reached the end of the Potsdam program, henceforth there may be a peace conference of all the peoples of the earth who are interested in the peace."

Two fundamental errors of American policy contributed to today's unfortunate situation in Europe, Senator George continued:

"First, our conclusion to reduce Germany to a pastoral state. . . . It is proper, of course, to destroy militarism as such, but the complete destruction of German economy was a vital mistake so far as the peace of Western Europe and the world is concerned.

"The second mistake is that we wholly misconceived the aims of Soviet Russia. Having been associated with Soviet Russia in a high military enterprise, we naturally assumed that she shared somewhat our democratic ideas, at least our main objectives and purposes. Events have very clearly demonstrated that in both of these conclusions we were in error, grievously in error . . . "

Russia now stands exposed to the world as maverick and outlaw—a government utterly without conscience, honor, or moral purpose.

Russia stated frankly at London that she takes the view Europe can never recover. As each nation sinks into the economic bog, Russia will move in. She anticipates that Greece will be next—as soon as the present American aid funds are exhausted. That's the Russian government's conception of European history for the next generation.

The new American policy, on the other hand, is based upon a firm convicion that Europe, with an honest helping hand from the world, can win through to recovery.

As Secretary Marshall observed in his radio report to the Nation, 1948 will tell which way the pole is to fall.

Historical Note

Keep your eye on H.R. 4482, introduced late in December by Representative Cole, of Missouri, to bar from the ballot in all States those political parties which have been determined by the Congress to be subversive to the American Constitution. The bill would fall within the scope of Article 4, Section 4 of the Constitution which provides: "The United States shall guarantee to every State in this Union, a republican form of government and shall protect each of them against invasion."

The Cole Bill would apply to every

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political party affiliated "directly or indirectly by any means whatsoever with the Communist Party of the United States or the Communist International, or any foreign agency . . . " which advocates the overthrow of the U.S. by force, violence, sabotage, sedition, treason and other unlawful means.

Says Mr. Cole, since the U.S. already has appropriated about $600-millions to check the spread of Communism in Europe, why not this simple, cost-free method at home?

"The earlier we wipe out every vestige of this venomous activity within our own borders, the stronger we shall keep ourselves to withstand its attacks from other sources. The threat to our national security is so great that immediate and drastic action must be taken."

The Cole Bill has been referred to the Judiciary Committee for hearings and report. Passage is almost certain before June.

Cole's Bill was introduced the day the CIO chemical workers were threatening a mass strike at the Oakridge, Tenn., atomic energy plant. That strike was compromised in negotiations, but the Atomic Energy Commission has never challenged CIO control at Oakridge.

Railroad Equipment Orders Include 125,395 Freight Cars, 1,180 Engines

Railroads and private carlines had 125,395 new freight cars on order at the beginning of December. Of the total, 110,822 cars will be for Class I railroads and railroad-owned privately controlled refrigerator companies.

New freight cars on order by the Class I roads and refrigerator lines included 46,608 hoppers of which 3,762 are to be covered, 13,292 gondolas, 871 flat, 6,034 refrigerator, 750 stock, 583 miscellaneous and 42,684 box, these latter including 40,707 plain and ventilated and 1,977 automobile cars.

Class I railroads also had 1,180 locomotives on order, the largest number since October, 1923. The December 1 figure included 1,143 diesels, 33 steam and four electric compared with 493 diesels, 65 steam and six electric on order one year ago.

Cost Accounting Facts and Fantasies

(Continued from page 28)

ever, that the actual conditions were what the management of this company considered them to be.

An Additional Example

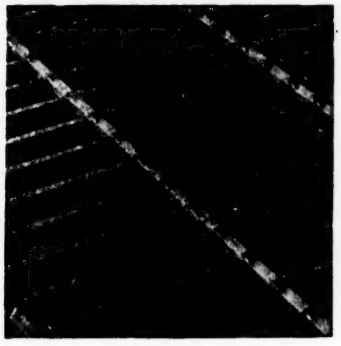
Lest it be thought that the preceding example is a very unusual one, here is another from a considerable number. It involves a failure to understand the use of cost figures in setting prices and also a failure to realize the cost of small orders in office and shipping department.

A machinery manufacturer used certain small parts in many sizes and in limited quantities of each size. Some were used in new machines but a much larger number were sold separately as repair parts for machines already in service. These parts were machined from bar or sheet stock. The regular indirect overhead expense rate for that part of the machine shop was used in calculating the factory cost of these parts.

Because the average repair part order was rather small and the cost of handling each order through the office and the shipping department was substantial, the selling price included a large mark-up over factory cost and was calculated by adding a rather high percentage mark-up to the factory cost. The resulting prices were very high on a per pound basis but there were practically no complaints from the customers, principally because, on the average order, the quantities were small and the total value of the invoice too low to make the price seem excessive.

The demand for a few sizes finally increased to the point where it was decided that it would be profitable to purchase forgings for these few sizes, although the minimum quantity of forgings that could be purchased at a reasonably low price was so great as to last for a number of

(Continued on page 54)



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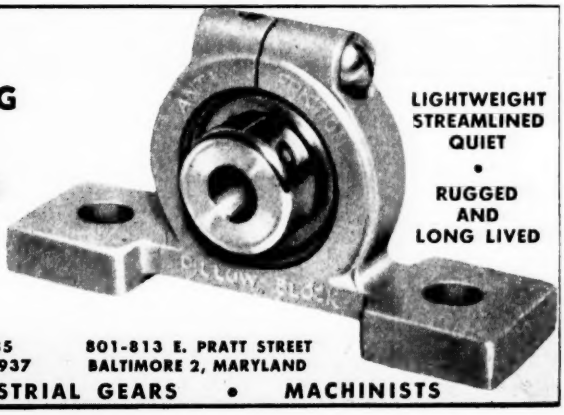

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Cost Accounting Facts and Fantasies

(*Continued from page 53*)

years. This resulted in a serious risk of loss through possible obsolescence and a certain extra cost for storage, including the value of money tied up in inventory.

The forgings were received and in spite of the fact that they really represented a very different situation from the cost, risk, and price viewpoints, they were priced at first by using the same percentage mark-up over factory cost. As very little work needed to be done in the factory, the resulting prices were considerably lower than the previous prices and in most cases were not high enough even to cover the costs in the office and in the shipping department, to say nothing of the extra risks and costs resulting from the large inventory of these forgings.

This situation eventually came to the attention of the general manager, who ordered the prices raised to those in effect prior to the change to forgings. He also expressed himself in no uncertain terms with regard to the stupidity of the man who had priced the parts made from forgings lower than the prices previously in effect.

Some person in the organization certainly should have recognized that the change required a study to determine whether a new pricing method should be used, and also required a specific decision as to whether the previous prices should be continued.

In this particular case the general manager himself was really responsible for the error. He had himself approved the change to forgings as his subordinates had properly been unwilling to authorize a change that required such a large inventory. The question of what price should be charged for these parts under the new conditions should certainly have been settled at the same time. Top management cannot hope to escape responsibility for such things.

The next article in this series, to be published in our February issue, will continue the general discussion of cost accounting problems. It will include a discussion of some errors which the writer has observed in the charging of direct material and direct labor.

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Harvester's New Plant

(*Continued from page 35*)

tion.

Company officials report no difficulty in obtaining workers for the new plant. Three times as many applications are on file as the 3,000 jobs the plant will offer. Less than one-third of these have been employed. It will be necessary to train a part of the skilled and semi-skilled workers; however, a considerable number of the foremen and assistant foremen are Memphians.

The first cotton picker made by assembly line methods is expected to leave the Memphis Works early in 1948. During the first quarter of the year, the works will also begin making the hay balers. Later products will include a wide variety of disk plows, cultivators, planters and other tillage tools.

A good portion of the cotton picker will be actually made at Memphis. The machine will be assembled there. The picker unit and the Farmall M tractor on which it is mounted will be produced at other Harvester plants. Production goals call for 1,500 cotton pickers built in Memphis in 1948.

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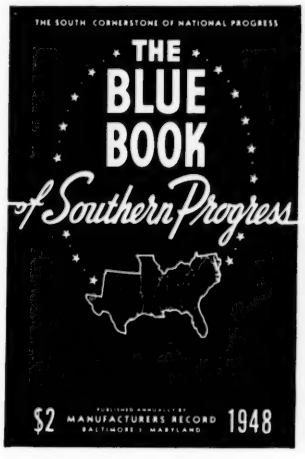

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City ..... Zone # ..... State .....

New Plant Making Gypsum Lath

(*Continued from page 29*)

Little manual labor is required from the time the rock is delivered by ship to the final stacking of the packages of finished products in the warehouse. Belt conveyors carry the rock up to the time it is pulverized. Screw conveyors transport the powdered gypsum.

How this modern materials handling marvel works may be understood from the fact that when the gypsum is brought from Novia Scotia, a huge clamshell lifts it from the ship's hold to a long conveyor. From that moment, hardly a hand touches the gypsum until it rushes from the breaking rolls as lath many thousands of feet away.

The sequence of operation is something like this: A ship docks at the 600-foot long pier, where a steel tower moves alongside on tracks and immediately begins scooping out the gypsum cargo by means of a big bucket. Several days of this digging unloads the vessel and starts the rock in the form of lumps and fines on its shoreward journey.

Long conveyors up to 775 feet operate at the rate of 400 feet a minute to hurry the rock toward storage at 500 tons an hour. These conveyors are installed both on the pier and from there to the outside storage area and connecting early stages of the rock processing machinery.

If inside storage is desired, the material can be dropped automatically in piles spaced neatly along the longitudinal dimension of the shed which covers practically the entire length of the pier. Should outdoor storage be required, the rock is moved still farther to a shuttle conveyor and thence to a second and longer belt to the outdoor location.

Reclaiming the rock, preliminary to manufacture of lath, board or plaster, is the second phase of the herculean transportation task. An overhead crane in the pier shed and a Link-Belt Speeder crane at the outdoor piles participate in the operations, depending on the conveyor system to move the rock from point to point. The outside rock can also be dropped through doors to a subterranean conveyor.

When the gypsum rock enters the mill building, it is first run through the primary crusher, from which it travels to the dryer where the excess moisture is removed in a big rotary cylinder. Next step is through the secondary crusher from which the rock enters the Raymond mills for the grinding that reduces it to flour fineness.

There are ten of these Raymond mills, five to a row. Big pipes lead upward from them to the Cyclone units and precipitators. The former throw out the heavy particles by centrifugal force and return them to the Raymond grinders for further processing. The precipitators extract the dust particles from the air electrostatically.

In the oil-fired calcining kettles, or kilns, no fire touches the gypsum, which is then transferred to the silos, from whence it is drawn for either the board-making operations or for the St. Regis machine where plaster will be bagged when plaster output starts in January. Conveyors, in the form of big screws, are used to transport the fine white powder in these operations.

The machine installed in the 775-foot long board building is almost that length. Paper, starch, ammonium sulphate and water are beat into a solution on a lower level and piped to a point above where the gypsum is added to make a slurry which is whirled onto the machine's bed.

As the mixture moves along the trough-like conveyors, it is sandwiched between two continuous sheets of cardboard, the one arriving horizontally and the other rolling down from above. In a matter of minutes, this board is run through long dryers, where the heat of around 400 degrees dries out the water.

A cutting and scoring operation, in the case of the lath, shears the material by revolving blades into eight-foot lengths and makes a score halfway between. The lengths are moved along roller conveyors through the drier at any of eight levels. Fireproof Gold Bond gypsum lath 14 inches wide and four feet long comes off the far end of the machine and is wrapped six to the package. The annual output is estimated at 160,000,000 feet.

Words can hardly describe the operations properly. Names of the manufacturers of the equipment give some idea of its intricacies. A. F. Smith tube mills, Ersham mixers, Sly and Cyclone dust collectors, Koppers precipitators, Combustion Engineering boilers, Link-Belt conveyors, Robins unloading tower, Harnischfeger crane, Pennsylvania crushers and Hardinge dryers are among them. American Bridge Co. furnished much of the structural steel. Cole Manufacturing Co. participated in the board machine manufacture.

The plant was constructed in the record time of 15 months, despite the many difficulties existing during that time. In fact, steel deliveries were about five months behind schedule. Baltimore Contractors, Inc., headed by Victor Frenkil, is the contractor. Consulting engineers are Hall, Turpin and Wachter, also of Baltimore. E. W. Zaunmiller is resident engineer for the Gypsum company; Paul Simons, superintendent for the contractors.

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Illustration above is of a cotton gin in the rich San Benito area of Texas.

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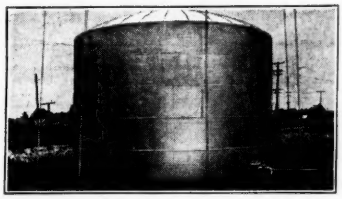

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Katy's Industry Promotion Program

(*Continued from page 33*)

ganizations such as the Katy's industrial development department stand ready to aid.

As an example we might take a small business man, experienced all of his business life in the canning industry. He knows markets and knows canning. Perhaps he knows most major fruit or vegetable growing centers. He has a comparatively small amount of capital and wishes to go into business for himself. To make, or have made, an exhaustive study of all conditions pertaining to a good location would eat into his capital—the very cost of survey would be prohibitive.

However, knowing general business, he calls upon a representative of an industrial development department and states his problem. Within a few days he has placed before him a complete survey—access of raw materials: access of markets: labor conditions: climatic conditions; water supply and power costs; housing situation: competition: buildings for possible use or sites for possible buildings: even switching facilities and train schedules—everything he needs to know to intelligently plan, construct and operate a successful canning business.

Large industry, as well as small, calls upon organizations such as Mr. Till's for initial aid or confirmation of their own findings. In selecting a spot in which to locate a new factory, the industrialists of the East and North shop the proposed district with more care than a frugal housewife shops a supermarket. Often they will make a preliminary study of the area in advance. They may write to an industrial development department for preliminary figures, stating their needs in raw materials, power and fuel, water, labor, etc., asking for recommendations of towns or cities meeting the requirements. Then, with the groundwork laid, they send their own field engineers and economists to make an exhaustive survey in areas suggested.

Other industries may make their own surveys first, then call upon the industrial development department for confirmation of their own findings.

Here again a single survey cannot cover all requests. A feed mill looking for a small town, for instance, might be finally located five hundred miles from a pottery plant, although both are looking for primarily the same thing—good plant site, rail accessibility to markets, excellent labor conditions, etc. In one thing they differ—raw materials. The pottery needs a clay bank, the feed mill a grain producing area.

Sometimes even these requests can be still further classified, Mr. Till points out. The feed mill, for instance, may be looking for an area of cattle feeding farms, and thus although importing most of the raw materials, would be at close hand to the greatest possible market area. Another feed mill might be looking for a location in the heart of the grain district, with raw materials close at hand and distant distribution necessary to gain markets.

A corporation planning to export fertilizer must of necessity decide whether it is the wiser move to locate in one of the gulf ports, where means of export are within easy reach, and transport raw materials from a distance, or whether to locate at the source of raw materials and ship the finished product to the ports.

In all of these things Mr. Till's office aids the prospective manufacturer. If a single survey proves insufficient, a second is made, and if necessary a third; as many as are needed to fully cover the situation at hand and answer all questions which may arise.

The Katy's staff also contains an agricultural expert—a man whose education and preliminary background as a county agent has fitted him for the job at hand. Since the new era in agriculture, it is almost impossible to draw the line as to where agriculture stops and industry begins. The two are closely connected.

The Katy's development department has taken this fact into consideration and agricultural statistics amassed in the files are almost equal to those collected on industry. In some towns, for instance, most of the industry supporting the area is in turn supported by the agricultural products of the same area. Denison, Texas, is an excellent example of this. Approximately 25,000 in population, the town boasts of a mattress factory which uses for the most part home-grown cotton; a large peanut oil mill, with raw products coming from the famous Red River Valley peanut producing area; poultry and packing plants, feed mills, and one of the largest cheese manufacturing plants in the nation.

So important does the railroad place improvement of agricultural aspects that recently the road, in conjunction with the Second National Bank of Houston, sponsored a soil conservation tour. The tour, composed of Federal and State experts on soil conservation, and working in cooperation with local business men and farm organizations, visited five leading agricultural centers of North Texas, studying conservation methods of those who had them in use, and offering aid to those farmers who wanted to know how to improve their lands.

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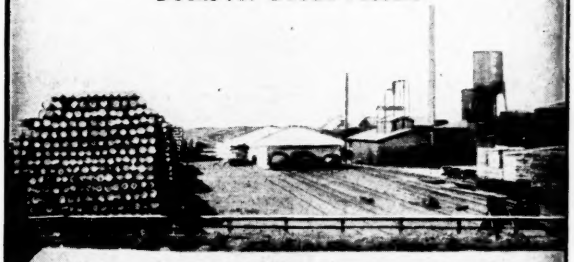

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High 1947 Steel Output Expected to Continue

(*Continued from page 35*)

start producing and these are seen as increasing the domestic output. Insufficient quantities of good quality scrap is the one deterrent that now looms on the steel horizon.

The current expansion is equal to nearly one-fifth of the capitalization of the industry and latest estimates of the additions being made show:

At least 3,000,000 tons per year in improved and expanded steel ingot capacity over the 91,241,000 tons capacity at the beginning of 1947;

Approximately 3,000,000 tons annually in improved and expanded pig iron capacity. The capacity at the start of 1947 was 65,709,000 a year;

About 3,000,000 tons a year in improved and expanded coke capacity, which at the first of 1947 was 60,280,000 for iron and steel companies;

More than 3,000,000 tons yearly in improved and expanded sheet and strip capacity. Production in 1947 is estimated around 18,000,000 tons.

Substantial expansion programs by steel companies which include Bethlehem Steel Company's big plant at Sparrows Point, near Baltimore, Md., Tennessee Coal, Iron and Railroad Co., United States Steel subsidiary at Birmingham, Ala., National Steel Corporation's Weirton, W. Va. plant, are aimed at keeping steel production facilities abreast of the requirements of the nation in the future.

The Institute statement made by President W. S. Tower emphasized that nearly every major peacetime outlet for steel received more steel in 1947 than in 1940, the earliest year for which comparable data was available. Tonnages going to some of the major outlets are sharply higher, with more firms receiving steel than ever before in history.

Norris Sees More Industry Joining Southern Activity

Ernest E. Norris, president of the Southern Railway System, predicts that during 1948 hundreds of additional new factory whistles will join the mighty crescendo that will welcome the New Year throughout the South, if Southerners continue to work together.

To illustrate the railway's "abiding faith" in the continuing industrialization and growth of the South, Mr. Norris pointed to $63 million in new motive power and rolling stock placed in service by the Southern during 1947 and on order December 1.

In 1948, the Southern will continue to do everything "humanly and financially possible" to keep abreast of the mounting transportation needs of the territory it serves, Mr. Norris said. However he stressed that "the ability of railroads to pay for such improvements and additions is largely in the hands of the federal and state governmental bodies that control railroad rates and fares. It's up to these government agencies to provide the 'wherewithal' in the form of adequate revenues, if railroads are to remain privately-owned, self-reliant, and able to give at all times the efficient, economical transportation service that is the backbone of our entire economy."

New equipment placed in service by the Southern in 1947 included 116 units of Diesel motive power (84 freight road Diesels and 32 switchers), 1,000 automobile box cars, 500 plain box cars, 600 gondola cars and 250 ballast cars.

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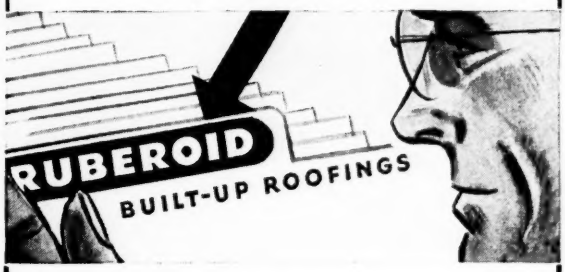

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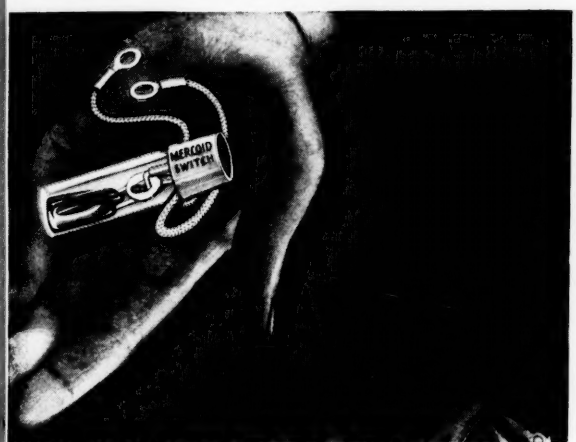

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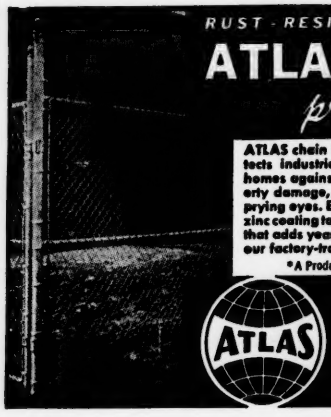

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